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The Journal of the Fire Protection Profession Since 1877

Vol. 89, No. 8 AUGUST, 1936 Member A.B.C.—A.B.P.

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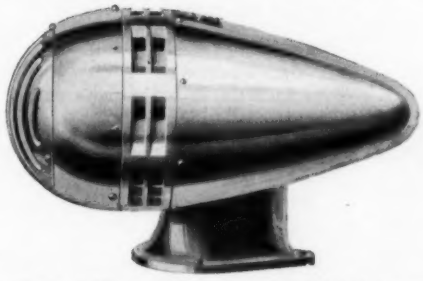

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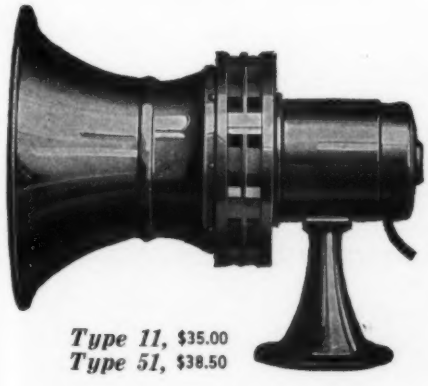

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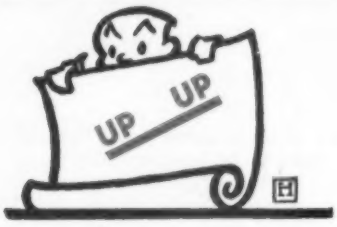
FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

ROBERT H. LOCKWOOD, Associate Editor
FRED SHEPPERD, Editor
N. N. WOLPERT, Assistant Editor



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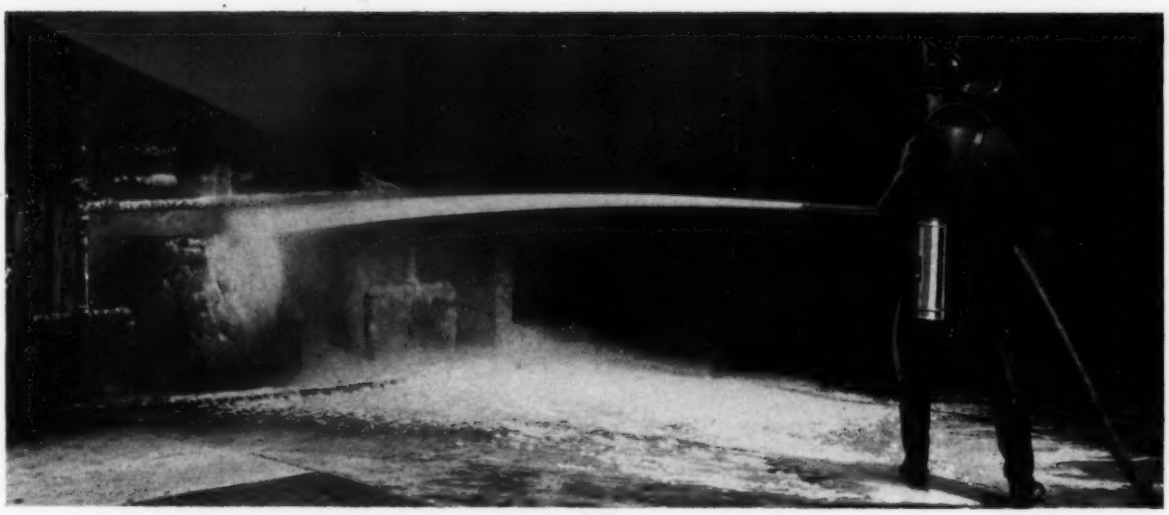

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Defective insulation on wires.

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Why Gamble With Public Safety When Such Protection is Available?

FIRE ENGINEERING

The Journal of the Fire Protection Profession

Volume 89 AUGUST, 1936 No. 8

With the Editor

The I.A.F.C. Moves Ahead With an increase in membership during the past year of over twenty-five per cent, and the staging of the most successful Convention since pre-depression times, the International Association of Fire Chiefs is definitely headed toward a period of increased prosperity and strength.

If the outstanding program of the Convention at Toronto is typical of what may be expected in the future, then the importance of these annual conferences will increase with each succeeding year. And improvement in the fire apparatus and equipment field will mean added support from the manufacturers.

The Chairman of Exhibits, Chief Roy Mottesheard, did excellent work in nearly doubling the revenue from exhibits this year, as compared to last year. Next year at Oklahoma City, there should be an equally great increase over this year.

Recognizing the manufacturers by giving them a full half day on the program for talks and demonstrations proved an effective way of making them realize that they are an important part of the organization.

Conducting of the meetings was ably doné by the President, Chief Charles J. Brennan and, after all, the way the meetings are handled has a very important bearing on the success of the Convention.

It was very encouraging this year to find that there was competition for next year's conference. Four invitations were received. Last year there was but one.

It will not be easy for the selected city to excel this year's host, Toronto, in hospitality, entertainment and convention management, although geographically the former has the advantage.

The officers of the International Association of Fire Chiefs may well be proud of its sturdy growth. With the present strong line-up of officers, this growth should be maintained, and the ground lost during the lean years of 1931-1933, regained.

Fred Sheppard

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Electric Power on Fire Apparatus Aids in

Speeding Up the Firemen's Work

By JOHN CLENDENIN
Electrical Engineer

FIRE Department officials are fully aware that an abundance of light in fire fighting not only gives protection to the men but also accelerates the rate at which the conflagration may be subdued. Nor is this the only consideration. The introduction of floodlights into Fire Department work has emphasized the value of electrical energy as an independent source of power. There have been repeated instances, where, because of severe weather conditions or failure in the power line, the electrical energy available from the fire truck has been the only source which could be used.

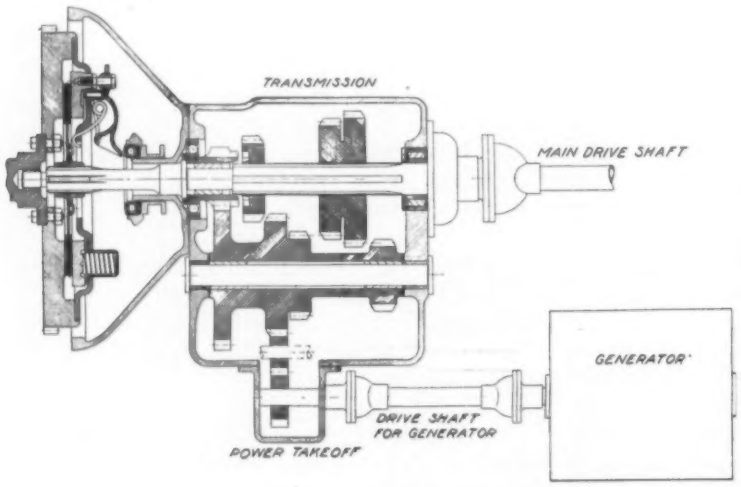


Fig. 1. Power Takeoff from Truck Motors

The installation of generating plants on trucks is a very simple operation, with a range of flexibility as to power and method of assembly. Units may vary in size from 750 watts, 110 volts direct current, to those delivering as high as 30 kilowatts (30,000 watts). The smaller machines may be driven from the fan belt, while plants varying from 1,500 watts to a maximum of 10 kilowatts may be operated from the power takeoff. Electrical power in excess of this amount may be obtained from a special generator mounted in line with the main drive shaft. This last unit is so designed that the armature will rotate only when engaged by a suitable gearshift, with the propeller shaft disconnected at the same time.

These larger units may be equipped with a governor control, in addition to the voltage regulator. The voltage regulation supplemented by the governor on the larger units, makes it possible to obtain voltage control without depending on hand rheostats. Furthermore, such control is an added protection to whatever equipment is being operated from the circuit, since, if the engine speed should be inadvertently increased, or, if the load should suddenly be removed, with the hand control, the voltage would rise rapidly and seriously damage any equipment being operated at the time.

Generator Drives

Generator mountings as defined, namely, units under the hood of from 750 to 1,500-watt capacity, driven from the fan belt; units of from 1,500-watt to 10-kilowatt, driven from the power take-off directly, with a propeller shaft and universal joints (Fig. 1); and generators of from 10 to 30-kilowatt, mounted in line with the propellor shaft (Fig. 2), are all located so that all body space is available for equipment use.

It is readily understood, therefore, that a large volume of electrical energy may be made available in any standard truck, using the motive power as a prime mover. The larger generator, of course, requires the selection of a truck of adequate engine capacity, in order to obtain a safe margin of overload. Experience has proven that, where the modern truck engine is properly adapted to the particular generator used, successful operation over long periods of time is assured, without excessive wear and tear, and at comparatively low temperature.

Wide Range in Design

Floodlighting equipment may be as simple or as elaborate as desire and necessity dictate. The smaller community may be well served with two 500-watt lights, while the larger city may demand five of such lights with, perhaps, two additional 250-watt lamps. Cable reels of the live circuit type enable these lights to be carried apart from the car and to be kept illumined while the cable is being unreeled without the delay and inconvenience of plugging into the circuit. It is important that the connectors be of the water tight type, as many times the operating cable lies under water and might be short circuited if the conventional plug connectives were used.

For large city use, where there are many high buildings, and for use on a waterfront, an additional lamp should be of the searchlight type, with 1,500-watt bulb, to give approximate 2,000,000 candlepower in the projected beam to easily reach the top of high buildings or cover a distance of several miles.

Power for Tools

This possibility of developing electric power in large volume offers the opportunity of adding other electrical equipment as part of a floodlighting installation on an emergency rescue and floodlighting truck.

Among the first to be considered is an air compressor and storage tank of adequate size to operate an air hammer of the pavement breaking type.

In a recent fire on one of the steamship piers in New York City, where one of the points of conflagration was

under the concrete floor, it was necessary for the Fire Department to call for an air compressor unit from a public utility company. There was naturally some delay in getting this unit to the fire, a condition which would have been avoided, had the Fire Department been supplied with a compressor unit of its own. It would be possible to think of many instances where a high powered air hammer of this type could be used to expedite fire fighting.

Another piece of equipment which could be operated from the air compressor is an air saw, which would be most serviceable, especially where some wooden obstruction had to be removed with the greatest dispatch. Should the compressor not be included, then an electric saw might be operated from the same source of power as is used for the floodlights.

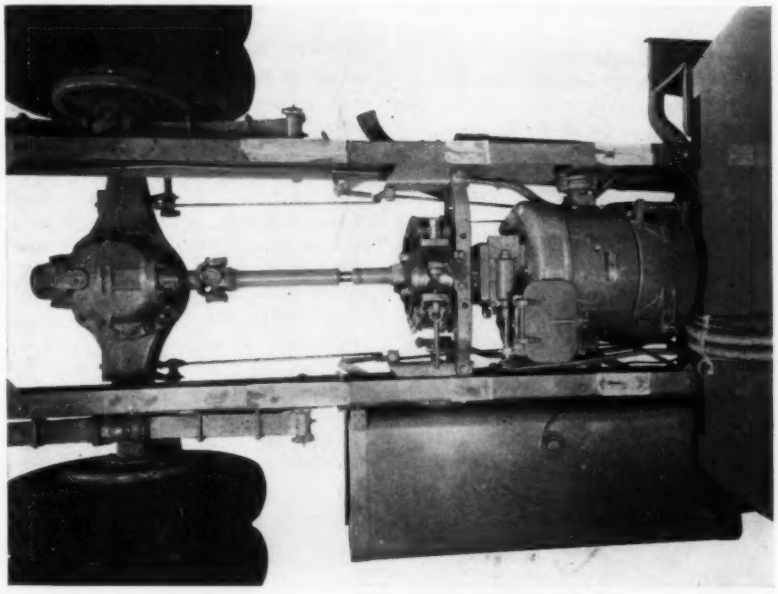


Fig. 2. Photograph of Generator Assembly

Size of Generator

A truck with all the equipment mentioned, plus some special equipment, can be operated by a 30-kilowatt generator placed in the line shafting, as previously described. If it is possible to omit some of the appliances, smaller generators may be used.

The modern gasoline engine operated fire engine can provide sufficient energy for doing many things not previously undertaken for assisting the firemen in their work. Departments have not progressed with the development of electrically driven tools.

The actual design of the car depends somewhat on the wishes of the Fire Department receiving it. The compressor and compressor tank may be stored under a portion of the seats, on either side. The live circuit cable reel may be placed at the extreme rear under the floor just forward of the rear step. Small cable reels each containing 100 feet of cable, can be kept in a part of the space under the seats. The lamps rest on stanchions on the corners. Outlets for connecting up the electrical circuits may be placed around the sides of the truck on the outside.

The voltage regulator and a small switch panel for the lighting circuits can be put under the cowl. The switch panels for controlling the air compressor and the pump could be placed at the rear, on either side, in comparative small panels.

The fundamental point of this installation is that as high as 30 kilowatt of electrical energy may be available without taking up any of the body space, and that this electrical energy is obtained with automatic voltage control and consequently requires a minimum of attention from the operating crew.

Many Emergency Uses

The discussion in this article has been limited to the use of fire trucks for fire fighting, but Fire Departments are constantly being called on for emergencies where speedy and efficient action are needed: Automobile accidents, transportation wrecks and drownings,. Instances have occurred where due to the breakdown of hospital lighting plants, the Fire Department's lighting truck provided emergency lighting service until the hospital lighting system could be repaired.

There is no doubt that any device or piece of equipment which will increase the capacity for service of a Fire Department or truck means just so much more in safety and service for the community.

Chief Quenches Elephants

The burning thirst of four circus elephants were quenched by Chief Abels, of Dravosburg, Pa., and as a result he was haled to court for giving away 1,000 gallons of water from a hydrant.

In court, the Chief asked the prosecutor to prove that the animals were not on fire.

The prosecutor asked, "Well, they didn't show any symptoms, did they?"

"They certainly did," replied the Chief. "Just look at all the water it took to extinguish them."

The case was dismissed.

Fire Warden Hutchins Honored

Maxwell C. Hutchins, State Fire Warden of Massachusetts, recently observed the twenty-fifth anniversary of his entering the service of the Commonwealth to take charge of forest fire prevention and control work. Before coming to Massachusetts he had directed forest protection in the Adirondacks for New York State. At a meeting of the Norfolk and Bristol County Forest Fire Wardens' Association he was presented with twenty-five silver dollars, a lounging chair, reading lamp, and smoking set. The observation tower men gave him a desk set.

HARRY BELKNAP.

Ex-Chief Patt Dead

On June 17, a few days before the opening of the Hartford Convention of the New England Association of Fire Chiefs, death claimed Ex-Chief Irving F. Patt, of the Central Falls, R. I., Fire Department.

For many years he had been a regular attendant at the New England Conventions accompanied by his son, Captain Everett I. Patt, also of the Central Falls Department.

Although in failing health a year ago, due to several months of severe illness, Chief Patt rallied and was able to attend the convention at New Bedford.

He had a notable career in the fire service and won a host of friends among the New England Chiefs, all of whom were deeply grieved to learn of his death just before the Hartford, Conn., convention.

Chief Patt was eighty-eight years of age. He joined the Fire Department when sixteen years old and became Chief Engineer in 1887. He continued as Chief until his retirement in 1908.

There was a large attendance at the funeral services which were held on the afternoon of June 20 at his late residence in Central Falls.

HARRY BELKNAP.

The Crime of Arson

Sixth Article of a Series Which Will Cover Outstanding Cases of Incendiarism and How They Were Handled

By GEORGE O. MANSFIELD
Chief of Fire Investigation, Massachusetts State Police

THIS is a case which emphasizes the fact that information secured in advance may result in the apprehension of the perpetrator of an attempted fire, and also that diligent and patient inquiry must be made in order to obtain results.

The facts briefly were that certain information had been received from a confidential source that two professional firemakers, who resided in Providence, R. I., had been hired to burn an unoccupied hotel in Massachusetts, thirty-five minutes ride from Providence. Immediately, a checkup of all unoccupied hotels was made in an effort to locate the particular building that might come within the area. One was found that looked like a prospect and forthwith a twenty-four-hour-a-day watch was placed over it.

Contact with Firemakers

When nothing developed, an agent was dispatched to Providence, where he learned the identity of the alleged firemakers, soon gaining their acquaintance. By a clever ruse, he endeavored to hire them to burn a building. One of his requirements in the proposed deal was that they should do a thorough job. He made inquiries as to their ability and sought some evidence as to their previous activities; whereupon, they told him that they were soon to burn a building in Massachusetts and that they would show him the ruins to demonstate their ability in being able to accomplish a complete demolition.

The agent expressed a desire to accompany them, but the firemakers declared otherwise. While they furnished him with considerable information, they did not permit him to be in on all of the plans. The agent secured much valuable data, however, such as a good description of the two men, the make and registration of the automobile they were using and the location of the "hangout" they maintained in Providence. As a matter of fact, several officers of the Fire Marshal's office went to Providence to look over these men, as the agent associated with them at eating houses and various places of amusement.

One afternoon, at 3:30, the agent telephoned headquarters and stated that the fire was to occur that night and that the "torches" had been to the premises and had prepared the building for the touch-off. He reported that he still did not know the exact location of the hotel, which fact left this office in a rather baffled position. With the time so short, speedy action was required.

There appeared only two appropriate means of apprehending these criminals and these were: One, to cover every road leading from Rhode Island into Massachusetts; two, to attempt to trail the firemakers from their headquarters to the scene of the crime. Officers were placed at all strategic points and were furnished with a description of the men, the car and the registration number.

Two cars containing not only Massachusetts officers, but also Rhode Island police were sent to Providence and the "hangout" was watched untii the men started out in their car. They were trailed to the scene and there apprehended as they attempted to enter the building. The fuse to be used to start the fire was found in the pocket of one man and the key to the building in the possession of the other.

Upon entering the premises, a twenty-two room building, elaborate preparations for an incendiary fire were found. One hundred gallons of gasoline had been brought to the building in twenty-five gallon cans. The empty cans were found in the woods nearby and on these cans were located some fingerprints which later were found to be the thumb of one man and two fingers of the other. This, of course, connected these two men with the cans. Later, in court, they pleaded guilty, but, true to the underworld code, refused to tell who had hired them.

House Contents Saved

In many cases where incendiary fires have occurred, it has been found that the contents of the building were removed prior to the fire. In one

An Unexpected Explosion Trapped the Firemaker and Wrecked the House
Gasoline was used. Vapor came in contact with the pilot light of a gas stove and caused an explosion which blew out a side of the house, and the windows, and trapped the firemaker.

particular case, in addition to this fact, there was another interesting development. The occupant, who wished to set a fire to defraud the insurance company, after having several loads of furniture removed to the home of a relative, started to prepare several fires; eight in all. This person was a cripple and had much difficulty in getting around, even with the use of crutches. She started three fires on the first floor and then, going upstairs, set five more.

Due to her inability to move quickly enough, the fires on the lower floor gained considerable headway and cut off her escape, with the result that she had to be rescued from the upper floor by the firemen. Her presence in the building, after all the furniture had been removed, along with the separate fires, resulted in her immediate arrest and consequent confession and conviction.

Value of Evidence

The matching of pieces of wood that had been sawed or broken, and the matching of the grain of such wood had been helpful in many cases. One case was somewhat unusual because of the fact that such matching was accomplished only after most patient work on the part of the officer.

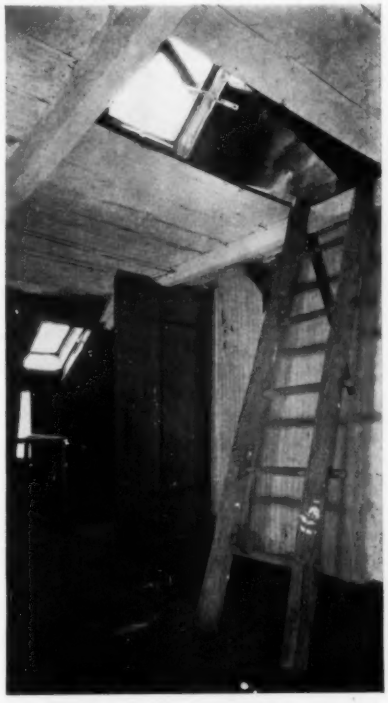
A disappointed suitor, who sought vengeance on the lady in the case, carried a bundle of wood from his home, eleven miles away, and built a fire under the window of the lady's home. The fire was discovered and quickly extinguished and the wood used to build the fire was salvaged by the officer who was summoned to investigate. He went to the suspect's home, where he found a large pile of wood of a similar type and, piece by piece, he examined this wood until he found a piece which matched one which was found at the scene of the fire.

Disguised Fire Trap

Fire bugs many times endeavor to secrete or camouflage a fire trap so as to circumvent the possible discovery of such evidence. In a recent case, where an antique furniture store was set on fire, balls of wool, around which several matches were cleverly sewn, were placed among the springs inside the upholstery of chairs and couches. The trimmings on the bottom of these pieces of furniture had been loosened to allow the admission of the wool and matches and then retacked to the original position.

The firemaker expected that the heat from fire which was set in other materials would cause the ignition of the matches and burn the furniture. One chair was badly burned and, when the residue of burned matches was discovered among the springs of the chair, an examination was made of other furniture and the unburned "traps" found.

The use of gasoline and other volatile inflammable fluids to accelerate fires has, in many cases, proved a boomerang due to the fact that vapors have prematurely ignited and exploded, many times trapping the firemakers in the buildings. In one particular case, where great preparation was made to "fire" a large house and special attention given to a slow



Attic Skylights Were Opened to Give the Fire a Good Draught

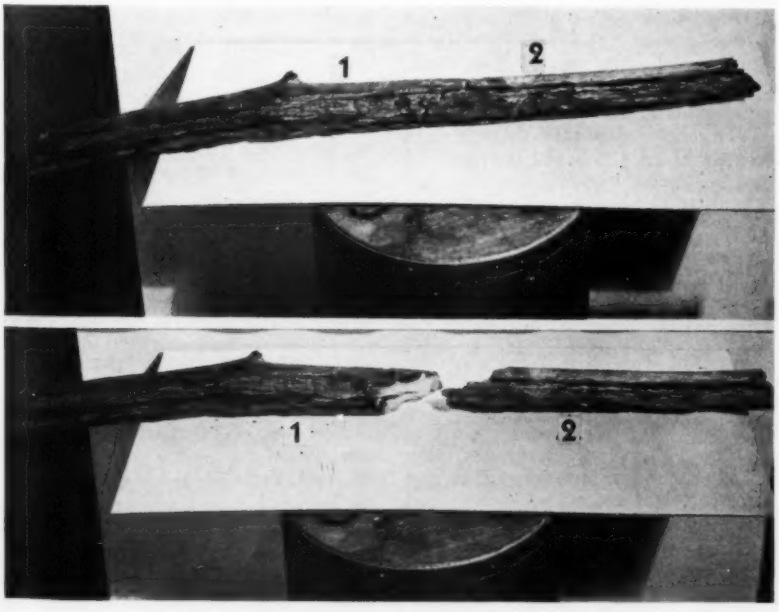
burning fuse which would allow a safe getaway, the well-laid plans were upset and the firemaker badly burned.

Six bottles of flashlight powder were spread in a fuse upon the floor and from this 150 feet of blasting fuse was led to a point under the rear door where it was to be lighted as the firemaker left the building. Twenty gallons of high test gasoline were spread around. The vapor from this came in contact with the pilot light of a gas stove and caused an explosion.

The firemaker was found by the Fire Department, seriously burned, and died two days later from the fire. He made a dying statement, however, which involved those who had hired him.

Return to Fire Scene

Certain types of pyromaniacs have a peculiar trait of returning to the scene of previous fires or to the general vicinity thereof, to set additional fires. One of the most unusual cases of this type and one which demonstrates that even years may elapse be-



A Firemaker Was Trapped by the Matching of Wood

Through the painstaking work of an officer, samples of wood found at a fire were matched with pieces at the home of the suspect. In the two photographs, 1 is the piece of wood found in material that was set on fire and 2, a piece of wood found in a pile at the suspect's home.

Part of the Evidence that Caught a Pair of Insurance Frauds

1. Piece of floor board in which holes were drilled. 2. Splinter of wood found with bit in hotel room. 3. Extension bit with which hole was drilled. By matching up the splinter to fit with the board, it was proven that the bit found was used to drill the holes.

tween the original fire and subsequent ones was brought to light with the arrest of a fire bug who had set fires forty-four years ago.

A series of barn fires occurred in a particular neighborhood and it was very apparent that they were the results of the acts of a fire bug. A patrol was created, with the result that the pyromaniac was caught running away from a fire which he had set. When brought to the lockup, he disclosed his name and identity.

He was found to be the same person who, when young, terrorized the same neighborhood forty-four years previous by the same type of fire. He had served a prison sentence in Massachusetts and had traveled throughout the country after his release, but, upon returning to his native haunts, could not resist the temptation of setting fires again. Such a great change had occurred in his physical appearance that he had not been recognized prior to his arrest.

Trapped by a Bit

Too much gasoline, two inch-holes bored in the floors of several rooms and shavings from the borings found in the pants cuffs of the occupant of the building resulted in the arrest and conviction of one who planned a scheme too well before soaking the various rooms of his dwelling with high-test gasoline.

He took an extension bit and made holes in the floors of several rooms, so that the gasoline would run into the floors and ceilings and, also, the holes would afford a means for the flames to spread from floor to floor. A lighted candle was placed in a closet to allow time for a getaway, but vapors from the gasoline reached the flame and a terrific explosion resulted. A part of the roof was blown away, all the windows shattered and the corner of the building split wide open.

After the fire had been extinguished, the holes in the floors were noted. The owner, when questioned concerning these holes, attempted to explain their presence by saying that the roof leaked badly, and that he had placed the holes in the floors to allow the rain to go through to the cellar. He had made these holes, he said, some months ago.

At this point, one of the investigators inquired as to when he had purchased the suit of clothes he was wearing.

The suspect replied, "Two weeks ago," which date would have been subsequent to the alleged time of making the holes.

The officer had asked this question because he had observed shavings inside the cuffs of the suspect's trouser legs. Closer examination disclosed a quantity of such shavings which were the same type of wood as found in the floor and around the holes. This was a small piece of evidence, but it proved the principal feature of the case, as the suspect later pleaded guilty.

Professional Firebugs

Here is a case which not only disclosed that the firemakers, a man and wife, had left a long series of fires behind them throughout the country, but also produced many interesting pieces of evidence. This pair can easily be classed as professional firemakers, who operated to defraud insurance companies. It was a business with them.

They would move into a community, open up a small furnishing store, pay as little as possible on account for the goods they purchased, endeavor to build up a business and, while profitable, continue to run the business legitimately. As soon as the income from the store decreased, they would then hold a sale for cash, selling the goods far below their actual cost in order to realize ready money.

When the store was well stocked, they secured an insurance policy and always received as much as the local agent would give them. After the cash sale, such goods as were remaining, which were of special value, would be removed to a storehouse or shipped to a new location. Next would come the fire.

Starting the Fire

The usual custom of starting a fire was to have it originate in the basement. Several holes would be made in the floor, so that the fire would spread easily and goods in the store proper would be saturated with alcohol.

When this particular fire occurred, a passerby noticed it in its incipiency and sounded an alarm. The Fire Department arrived and quickly extinguished the fire. Evidence of incendiarism was found; the odor of alcohol prevailed and goods were found saturated with the same liquid.

The male member of the firm had conveniently gone on a buying trip to New York in order to be out of the way. He had prepared the setups before leaving, while his wife was left to set the fire.

She explained that she was making coffee on an electric plate, that she had gone out and had forgotten to shut it off and that the electric plate must have overheated. She added

(*Continued on page* 383)

I.A.F.C. Continues Its Advance

Toronto Convention Brings Out Biggest Attendance of Any in Past Six Years—More Chiefs Registered—Exhibits Entered Nearly Double Those of Last Year

THE Sixty-fourth Annual Convention of the International Association of Fire Chiefs, held at Toronto, Ont., on July 28-31, will go down on the record as the most successful Convention, from every standpoint, held by the Association since the pre-depression era. The registration of Chiefs was over ten per cent ahead of that of last year which, in turn, exceeded the previous four years by a large margin. Associate members and guests brought the total well above the total attendance last year.

Through the very effective work of Chief Roy E. Mottesheard, Chairman of the Exhibit Committee, the revenue from exhibits this year was almost double that of last year.

While several cities submitted invitations for next year's meeting, Oklahoma City was selected unanimously. That Chief George Goff will stage an outstanding convention is a foregone conclusion, for he has had considerable experience in conducting fire service conventions in his city during the past few years, and has demonstrated his ability in the management thereof.

Total membership gain in Association during the past year reported as exceeding 25%.

Oklahoma City selected for next year's Convention, the date to be determined by the Board of Directors.

Chief R. A. Bogan, Baton Rouge, La., elected President; Chief Daniel B. Tierney, Arlington, Mass., First Vice-President; Chief Roy E. Mottesheard, Dearborn, Mich., Second Vice-President.

Memorial Exercises

As usual, the memorial exercises were held during the first session.

Following the address of welcome by Controller W. D. Robbins, President of the Toronto City Council, and response by Chief William Gardner, of the Kansas City Fire Patrol, President Charles J. Brennan presented his presidential message.

In a very able and inspiring manner, Chief Brennan reviewed the work of the Association during the past year, and indicated its future promise.

Following the President's address, the memorial service was conducted, the oration being delivered by Rev. H. J. Pritchard. A list of the departed members was read.

Tuesday Session

The Tuesday morning session started off with routine business, including reports of various officers, adoption of the minutes of the preceding meeting, appointment of committees, etc. After these preliminaries, the technical program was taken up.

Mutual Aid Systems

The first paper presented was by Chief John J. Brennan of Pelham Manor, N. Y., on "Do Mutual Aid Systems Really Function?"

After reviewing the development of the mutual aid system in Westchester County, New York, Chief Brennan gave convincing evidence that such systems do function, and that they are a very valuable means of guarding against conflagrations.

Report on National Board Cooperation

Chief Daniel B. Tierney presented a very complete and instructive report on the meetings of the Joint Committee on Cooperation of the International Association of Fire Chiefs and the National Board of Fire Underwriters. He set forth the various objectives accomplished and outlined the future activities for the Joint Committee to consider. Many topics were covered in the report, including civil service law, Underwriter's labelled hose, rating of pumpers, per capita fire loss, adjustment of fire losses, and other subjects taken up in the deliberations of the Joint Committee.

A report of the meeting of the Joint Committee of the two organizations, and the Directors of the International Association of Fire Chiefs, was subsequently presented by Fred Shepperd, Headquarters Manager.

Functions of the National Board of Fire Underwriters

W. E. Mallalieu, General Manager of the National Board of Fire Underwriters, New York City, in his paper on "Functions of the National Board of Fire Underwriters," gave the delegates a very thorough insight into the workings of the National Board.

The National Board "gathers fire loss statistics and tabulates these by fire causes. It endeavors to bring about the suppression of incendarism. It influences the introduction of improved methods and standards of building construction. It encourages the adoption of sane fire protective measures, including efficient fire department organization and equipment with adequate and improved systems of water works and fire alarms, and establishes standards for the installation and use of hazardous and protective devices," said Mr. Mallalieu.

"The National Board of Fire Underwriters is not a 'corporation' or a 'money-making concern.' It has no legislative powers over the fire insurance business and exercises no jurisdiction over either companies or agents, nor over insurance rates or commissions. It is purely an educational, engineering, and statistical public service institution maintained by stock company fire insurance for the benefit of our national welfare."

In concluding his address, Mr. Mallalieu added: "The two great organizations (the National Board of Fire Underwriters and the International Association of Fire Chiefs) which we at this convention represent, have become integral parts in the great fraternity of fire protection. They are like the members of one family where the good of one is the good of all. This fellowship has been built up and will continue to become more firmly entrenched in our minds because our work is helpful to you, and without your assistance we fall far short of the goal which cooperation has achieved and will continue to achieve."

Handling an Emergency Caused by Gas Explosions

Chief Joseph N. Sullivan, Utica, N. Y., described the steps taken in handling an emergency resulting from city-wide gas explosions in sewers in Utica.

The trouble was caused initially by

At the Toronto Convention of the International Association of Fire Chiefs—L. to R.: Top—Chief Geo. Sinclair, Toronto; Chief T. F. Cuff, Menlo Park, Cal.; Chief H. F. Morris, San Mateo, Cal.; Chief Selden R. Allen, Brookline, Mass.; Chief J. E. Grainger, Cleveland, O. Chief Earl Traeger, Minneapolis, with Chief Peter Steinkellner, Milwaukee. Chief and Mrs. B. O. Hargrave, Birmingham, Ala. Chief W. S. Taggart, Asbury Park, N. J.; Chief C. A. Delaney and Miss Alice Zimmer, Lakewood, O.; J. H. Green, gen'l mgr., and J. D. Robertson, N. J. rep., Eureka Fire Hose Co. **Second Row**—Chief F. F. Knight, No. Tonawanda, N. Y.; Chief E. W. Gieselman, Syracuse, N. Y.; Salvage Chief W. H. Gardiner, Kansas City, Mo. Chief and Mrs. H. B. Wells, Newberry, S. C., with son and his wife. Chief I. Klinck, Memphis, Tenn., with two sons, Merril and John. Chief H. H. King, East Cleveland, O.; Chief M. M. Handy, Shaker Heights, O.; Chief E. V. Welch, Columbus, O. **Third Row**—The New England, Michigan and Ohio delegations. **Fourth Row**—Picnic lunch at Hanlon's Island; Mrs. M. M. Handy (left) and Mrs. E. V. Welch take Bob Anderson of Buckeye Iron & Brass, for a ride; the Louisiana delegation. **Fifth Row**—E. E. Lawlor, Jr., and J. M. Duncan, Jr., Alexandria, Va., with Mrs. and Chief A. P. Orban and Miss Sarah Peters, of Balt. County, Md. Delegates boarding boat for Hanlon's Island. Mrs. and Chief John Gibson, Mt. Vernon, N. Y.; Mrs. and Chief C. A. McGinley, East Orange, N. J.; Chief and Mrs. Ernest Beckert, West New York, N. J. **Bottom Row**—Field Instructor G. F. Williams of Texas Firemen's Training School, with wife and daughter. Peter Tomnie, American Fire Hose Co. Salvage Supt. James O'Donnell of St. Louis, with Mr. and Mrs. G. H. Coates of Fulton Bag & Cotton Mills. Chief Roscoe Foster, Norfolk Navy Yard. Dick Joyner, Eureka Fire Hose, Dallas mgr., with Chief Al Herring, Murphysboro, Ill., and latter's new gift car.

the rupture of a water main, which in turn caused the breaking of a gas main. Gas entered the city sewers, and subsequently explosions occurred at several points.

Before the point of leakage of gas from the main was located, the Fire Department had a very exciting time in protecting the public, and property, against damage.

Due to the effective work of the Fire Department, under the direction of Chief Sullivan, who was in sole charge of the emergency, the source of the trouble was finally located, and corrected.

Some Recent Arson Cases

George O. Mansfield, Chief of Fire Investigation, Massachusetts State Police, Boston, Mass., reviewed the history of some recent arson cases of unusual interest, which were handled by his Department. Lantern slides showing evidence of incendarism, equipment used for detecting the crime and locating the criminals added greatly to the interest of this paper.

Fire Departments in Flood Emergency Work

The Wednesday morning program started off with a paper by Ex-Chief Richard Lee Smith, of Pittsburgh, Pa., on "Fire Departments Serve in Flood Emergency Work."

Chief Smith described the unusual conditions which existed in Pittsburgh during the flood period early this year, and pointed out the many handicaps under which the Fire Department had to operate. Not only in fighting fire, but in the saving of lives of those marooned in the flood, the department did very effective work.

Chief Smith warned that cities which have never experienced floods may be due for them sooner or later, and that thought should be given to methods of handling such an emergency should it arrive.

As a part of the discussion of the same topic, Chief John C. Moran of Hartford, Conn., described his experiences during a flood which inundated a large part of Hartford early this year. Chief Moran called attention to the fact that this was not the first big flood Hartford has had, although it was the most severe in his experience. As at Pittsburgh, considerable effort was devoted to saving of lives of those imperiled by the flood. The fire alarm system at Hartford continued to function despite the fact that fire alarm circuits were under water, while the telephone service completely failed in several districts.

Fire Hazards of Air Conditioning

George W. Booth, Chief Engineer of the National Board of Fire Underwriters, New York, reviewed the present status of air conditioning, placing particular emphasis on fire hazards in connection therewith. After citing the growth of air conditioning, Mr. Booth described typical installations today and stressed harardous points in connection therewith. He also called attention to regulations that are now being prepared and which are designed to prevent the construction of hazardous installations.

An Interesting Symposium

The afternoon program consisted of a symposium in which seven different subjects were discussed.

The first topic, introduced by Chief Edward W. Gieselman, Syracuse, N. Y., was on "How Often and in What Manner, Should Fire Truck Brakes Be Tested?" Chief Gieselman reviewed his department's practice in this matter. The discussion on this topic was very animated. The consensus of opinion seemed to be that two-wheel brakes make fire apparatus obsolete, and no matter what kind of brake equipment is employed, where only two wheels are braked, the result is approximately the same. The most that can be secured, as pointed out by Ed Rumsey, Chief of Machinery, Detroit, was the locking of the two wheels. He further stated that whether the locking of the wheels is accomplished by foot brake or power brake, there is no difference in the results, for the braking effect is that due only to two wheels.

Chief Walter Israel, of Detroit, Mich., opened the second topic on "What Course Should Be Pursued to Reduce the Number of Accidents in Which Fire Apparatus is Involved?" Chief Israel felt that proper braking was the first step, and the most important one. Keeping the apparatus in first class condition was also pointed out as most essential in the campaign to reduce accidents.

Large Centrally Located Fire Stations

The third topic, "What Advantages and Disadvantages Are There to Centralizing Fire Apparatus in Large Centrally Located Stations?" was opened by Chief Daniel B. Tierney, Arlington, Mass. Chief Tierney has such a station in his city, and reported that the results from the plan were very satisfactory. He felt that having a large number of men in a station made better control of the force possible.

Taking the other side of the question was Chief Henry Fox, of Boston, who felt that too many men in one station was not desirable. Furthermore, obstruction in the street might necessitate routing the trucks by different thoroughfares to the fire, resulting in a loss of time.

Commissioner William G. Castimore, of Buffalo, N. Y., introduced the next topic, which was entitled "To What Extent Should a Fire Department Provide Recreation Facilities for the Men in Fire Stations?"

Comr. Castimore first raised the question as to whether the recreation referred to was physical or mental. He described the equipment for physical recreation in fire stations at Buffalo. From the floor the suggestion was made that if the three-platoon system was adopted, the problem of recreation will disappear.

"Handling Cold Weather Problems During the Past Abnormally Cold Winter," was reviewed by Chief Earl Traeger, of Minneapolis, Minn. He described experiences in his city, which were typical of many cities in the northern part of the country.

Chief Hugo R. Delfs of Lansing, Mich., discussed "Is the Junior Fire Department Plan, Whereunder Boys of School Age Are Coached in the Rudiments of Fire Protection Work, a Beneficial One?" His answer was that it was highly beneficial and excellent results have been secured from coaching school boys in Lansing, Mich.

Charging for Outside Runs

The topic which brought forth the most discussion was that opened by Chief Arthur Chambers of Yonkers, N. Y., and entitled "How Should the Problem of Out of Town Calls for Fire Apparatus Be Handled, Particularly Insofar as Charges Therefor Are Concerned?"

Charges reported by different Chiefs in the discussion ran all the way from $25 to $250 per company. The charge of $25 per hour per company was employed in a number of cities.

In Milwaukee, any neighboring town wishing protection must post a bond to guarantee the payment for runs before runs are authorized by the Fire Department.

It was generally felt that where a fire occurred in a home just outside of the city limits, aid would be given without charge, or without a contract. But where a town depends upon a

large neighboring city for protection, the town should be prepared to pay for such protection.

A Forenoon for Manufacturers

All of Thursday forenoon was devoted to talks and demonstrations by manufacturers. The plan of giving each exhibitor an opportunity to describe briefly his exhibit was instituted last year at Knoxville. It proved so successful, that it was resumed this year at Toronto.

The delegates first assembled in the Convention Hall to hear the manufacturers' talks. After each had been given an opportunity to appear before the meeting, the meeting adjourned, and the delegates went to the test grounds where demonstrations of fire extinguishing agents, including foam, carbon dioxide and water spray were carried out. One of the features of the demonstration was an attempt to burn a fire resistant frame shack. The wood of the shack had been impregnated with fire-proofing salts. Within the shack was placed a tank approximately eight feet long, four feet wide and one foot deep, which was filled with oil.

After spraying the shack with twenty gallons of kerosene, it was ignited. After the kerosene had burned away, leaving the shingles and other woodwork intact, the oil within the shack was ignited. It burned for nearly an hour. The tests were conducted under the supervision of Professors from Toronto University.

The building was equipped inside with pyrometers, which indicated the temperature within the structure during the fire. The temperature ranged up to nearly 2,000° F.

While the wood was badly charred, due to the terrific heat to which it was subjected, it did not burn, nor carry fire.

Quite interesting, during the course of the test, was the low temperature on the outside of the shack. Even when the interior temperature was above 1,800° F., the sideboards of the building were only warm to the touch.

Another demonstration, which was included with those of fire extinguishers, was of linen-lined hose recently placed on the market. Hose clamps and portable lighting units were also demonstrated.

Developments in Fire Resistant Lumber

At the Thursday afternoon session a paper was presented by E. F. Hartmann, on "New Developments in Fire Resisting Lumber." This paper had been scheduled for Wednesday morning, but due to the delay of Mr. Hartmann in reaching the Convention, it was postponed until the Thursday afternoon session.

Mr. Hartmann first reviewed the uses of fire-proof wood dating back a quarter of a century, and pointed out examples of the effectiveness of these woods over a long period of time in resisting fire. He also included a description of some of the features of the Underwriter's tests of the wood at the laboratories in Chicago. Incidentally, this treatment is the first approved by the Underwriter's Laboratories and where the treatment is employed according to specifications laid down by the Laboratories, the wood so treated is labelled with the Underwriter's label.

Round Table Discussions

Thursday afternoon program consisted entirely of symposiums and round table discussions. The first topic on the program was "What Cooperation Did You Receive from Public Utilities Where the Presence

Banquet Given by the City of Toronto to the Association, with About 900 Present

of High Voltage Electrical Cables or Equipment is Interfering With or Endangering the Work of the Fire Department?"

Chief John J. Towey, of Newark, N. J., opened this discussion. Supplementing the Line Department of the Newark Fire Department, which responds to all second or greater alarms of fire, the Public Utility Company also sends its own crew of men to the scene, to give all the necessary help in removing or shutting down power on charged wires that would menace the members of the department while operating on a blaze. If by any chance the fire should occur on an electrified elevated railroad, rubber covers or tarpaulins are furnished by the company, which can be thrown across the charged third rail so that the men and lines going over such rails are protected against electric shock. Such covers are kept in all railway stations ready for use when called for.

Regulating the Dry Cleaning Industry

Chief J. W. Stevens, State Fire Marshal, San Francisco, Cal., opened the discussion on regulations in California covering dry cleaning. Chief Stevens had on hand four of his deputies, who were called upon to explain various phases of the law, and the handling of violations. California has probably the most rigid regulations governing the dry cleaning industry, and the effectiveness of these regulations is shown by the absence of any destructive fires in dry cleaning plants over the past several years.

Dilapidated Buildings

In the absence of Chief Michael J. Corrigan, of Chicago, Ill., who was to discuss the subject, "How Should the Dilapidated Building Problem Be Handled? How Can Removal Be Effected?" James N. Gleason, Engineer in Charge of Equipment and Maintenance of the Chicago Fire Department, presented Chief Corrigan's paper.

Under ordinary circumstances, regulation, supervision, and physical aspects of this work are handled by the Public Works, Police, Building, Health and Fire Departments, with the co-ordinating features of the various departments' functions defined by State law and City ordinance.

Some two years ago the Federal government, in its work relief program, made an appropriation for the removal of sub-standard, unsafe, dilapidated and socially unfit buildings, etc., and since that time, approximately 700 structures have been demolished under the supervision of the Fire Department, working in conjunction with a local committee and federal officials. In addition to the Fire Department's activities, other local agencies and city departments have removed approximately 3,000 more sub-standard buildings.

To expedite the Fire Department's portion of the work to conform with the primary purpose of the Federal grant, the Chicago Fire Department adopted, and successfully carried out a program known as the "Owner's Consent Plan," that is, the owner legally assigns all salvage and materials from the buildings to a bonded and licensed wrecking contractor, to cover the expense of supervision, use of tools and equipment, cost of various kinds of insurance and other incidental expenses, plus their profit.

In concluding, Chief Corrigan said: "The benefits, either direct or indirect, gained by a Fire Department are many; it is a step in the right direction, but be sure that legal procedure is followed, so that you, or the local government you represent, do not become entangled in law suits caused by illegally removing or destroying other person's property."

Radio Broadcast in Fire Prevention Work

The topic "Is the Use of Radio Broadcast Beneficial in Fire Prevention Work?" was assigned to Chief Frank Charlesworth, of Providence, R. I. Due to Chief Charlesworth's inability to be present at the Convention, his paper was accepted and ordered placed in the Proceedings of the Convention.

In summing up his experiences, Chief Charlesworth said, "The Providence Fire Department considers that the radio has achieved in a three years' period more lasting and far-reaching results than could have been accomplished by the long drawn-out methods of previous years, and it still hopes to be enabled to continue the effective use of the air in spreading fire prevention education. To broadcast regularly and consistently until the public is thoroughly permeated with fire prevention consciousness, until the practice of the simple fire prevention laws has become a daily routine, and to be vigilant and unceasing in our efforts to hold in check the foe lurking in our midst are the desires and aims of our department. Personally, I am pleased and satisfied with the efficacy of this campaign and feel qualified to recommend the radio to all other departments desirous of seeking a means to reduce the appalling fire loss of our country."

Chief Robt. A. Bogan, Baton Rouge, La., the Newly Elected President of the I. A. F. C.

Life of Pneumatic Tires

Chief of Machinery Edward Rumsey, of the Detroit Fire Department, opened the discussion on "How Long Should Pneumatic Truck Tires Be Used Before Replacement?" Chief Rumsey felt that six or seven years was a satisfactory life of the tires and that they should be replaced at the end of that time even though they had not worn to a point of apparent danger.

This topic brought forth considerable discussion. Chief Rumsey was asked whether he thought dual tires would be more satisfactory than single tires on heavy apparatus. He replied that with the advent of low pressure tires there was nothing to be gained with dual tires, outside of possibly a little more traction, than with the single tires. He felt that the wider wheel base necessitated by using the dual tires was not justified by the small advantage gained.

A number of Round Table topics were included in this session. As to the present trend with regard to permitting companies and men to participate in out of town parades, it was the consensus of opinion that such participation be denied.

With regard to the Fire Chief having a voice in the selection of fire hydrants, it was the unanimous opinion that he should.

Permitting smoking in theatres brought forth a wide variety of opinions. After reviewing a number of cases where smoking had nearly caused panic, as well as physical injury, it was agreed that the Association should go on record as opposing the smoking in theatres.

The discussion of methods em-

Top (left to right): Chief Chas. J. Brennan, San Francisco, Cal., retiring President; Chief Daniel B. Tierney, Arlington, Mass., First Vice-President.
Bottom (left to right): Chief Selden R. Allen, Brookline, Mass.; Chief and Com'r. John J. McElligott, New York; Chief Geo. B. Goff, Oklahoma City, Okla.; Chief Ralph J. Scott, Los Angeles, Cal.

ployed in dewatering cellars showed a majority of opinion in favor of the use of siphons, as they prevent unnecessary wear and damage on apparatus, and are efficient and fast in operation.

Asbestos suits in the fire service likewise brought out a diversity of opinion. Some felt that they have a place in connection with first aid rescue operations at airplane crashes, but the majority believed that they were not satisfactory for general fire fighting operations.

The Closed Pumper

In answer to the question "Is the Closed Pumper Here to Stay?" many opinions were offered, but a large majority were in the affirmative. Among those having closed pumpers, who spoke in favor of them, were Chief Walter Israel, of Detroit, and Chief W. H. Palmer, of Charlotte, N. C. Edward Rumsey, Chief of Machinery, Detroit, explained the reason for his city purchasing closed apparatus.

In answer to a question as to the hazard of lessened visibility of the drivers in closed apparatus, it was pointed out that at the present time all chief officers riding to fires ride in closed cars and there seems to be no increased hazard nor less ability of the officer to size up the fire before reaching the scene.

Flame-Proof Fabrics for Draperies in Theatres

The symposium on "Are We Justified in Requiring Flame-Proof Fabrics in Theatres, Night Clubs, Restaurants and Other Places of Public Assembly?" was introduced in a paper prepared by Chief Ross B. Davis, of Philadelphia, Pa., and read by the Chairman in his absence. In Philadelphia, it is a hard and fast requirement that all draperies, fabrics, scenery, etc., must stand a rigid test by the Fire Bureau and Fire Marshal's office before their use will be allowed. As a result of this precaution, the fires are usually confined to the area of their origin, thereby eliminating rapid spread which would ensue if the materials were not of a non-inflammable type. In some cases screen and gauze are used, which materials are of the lace variety or light and webby. The department does not allow its use at all, as it cannot be fire-proofed, and when hung in close proximity to a high powered lamp used for scenic effects, ignition may result. "It is our opinion," stated Chief Davis, "from the actual conditions found, that all public safety officials, especially Chiefs of Fire Departments, Fire Marshals, etc., should be vested with the power to make rules and regulations stringent enough to absolutely control these places of public entertainment to such an extent that it would be impossible for them to open until proper inspection and check were made of all decorative materials used. It is also essential that regular periodic inspections be made of these places to insure the elimination of the possibility of the installation of inflammable materials."

Friday Session

On Friday morning various routine business was first taken up, including the report of the Secretary-Treasurer, the report of the Committee on State Vice-Presidents Exhibit Committee and Committee on Credentials. Also reports were presented of the Board of Auditors and the district secretaries.

Three New Life Members

Under new business, the first action of the Convention was to grant Honorary Life Membership to George Morley, of the Gamewell Company, Newton Upper Falls, Mass. In nominating him for this honor, his long service to the Association was outlined. His election was unanimous.

Another who was similarly honored was Paul W. Kearney, a writer on fire department subjects. Mr. Kearney has contributed articles on fire fighting topics to over 200 publications, and has also published a book, in collaboration with former Assistant Chief Thomas Dougherty of the New York Fire Department, on "I Smell Smoke." In view of the fact that Mr. Kearney has so ably presented the fire service to the public in his many articles, it was felt that he deserved Honorary Life Membership in the Association, which was voted to him unanimously.

Former Chief Wm. Russell, of Toronto, was also elected to Honorary Life Membership.

RESOLUTIONS

A number of resolutions were presented and adopted. These resolutions follow:

Cooperating with the W. P. A.

WHEREAS the Works Progress Administration of the federal government is eager to transfer "white collar" workers from projects of questionable value over to projects of economic worth, and

WHEREAS the Works Progress Administration makes men available at no cost to the municipality (the municipality, however, must furnish materials), and

WHEREAS such help has been utilized in many cities with material benefits to the Fire Departments,

THEREFORE, BE IT RESOLVED that this Association cooperate with the Works Progress Administration by formulating plans for Fire Department improvements, which will utilize the services of skilled "white collar" workers, such as clerks, draughtsmen, etc., so that such assistance as may be given by the Works Progress Administration will be fruitful of the most good to the fire service.

Endorsing Schools on Trains

WHEREAS Members of the Pacific Coast Association of Fire Chiefs, traveling by special train to Conferences at Seattle, Wash., and Toronto, Ontario, held educational meetings in a special

(*Continued on page 392*)

Chief Geo. B. Goff, Oklahoma City, Okla., the host to the 1937 convention.

Chief R. E. Mottesheard, Dearborn, Mich., newly elected 2nd V.-P., and Mrs. Mottesheard.

Chief Geo. Sinclair, Toronto, Ont., host to the 1936 convention.

EASTERN ASSOCIATION OF FIRE CHIEFS HOLDS HIGHLY SUCCESSFUL CONVENTION

Attendance Well Ahead of Last Year and Splendid Program Presented at Poughkeepsie, N. Y.—Large Gain in Membership Reported by the Secretary

DESPITE temperatures hovering around 100 degrees F., the annual Convention of the Eastern Association of Fire Chiefs, held at Poughkeepsie, N. Y., July 10 and 11, proved to be an outstanding one. One of the best programs ever presented by the Eastern Association was presented and discussion of all topics was lively.

The convention was called to order on Friday at 10 a.m., by Chris W. Noll, of Poughkeepsie. After the opening ceremonies, President Ross B. Davis, of Philadelphia, reviewed the work of the Association, and called attention to its increasing strength.

The afternoon session started with round table discussion on "What changes in fire apparatus design are necessary to meet changing conditions in fire departments, particularly in departments in small cities and towns?"

Booster or Chemical Tanks?

The use of booster tanks instead of chemical tanks was pointed out as one of the most notable changes at the present time. In answer to a question as to which was the better, chemical tanks or booster tanks, where water supply was limited, it seemed to be the consensus of opinion that the booster tank was more satisfactory, for any source of supply, such as wells, brooks, etc., could be called into use to furnish water to booster tank and keep it continuously in operation.

One Chief called attention to the ease with which chemical tanks can be changed over to booster tanks, it being necessary only to make connection between the tank and the pump.

The second round table topic was "How can a Fire Department get new apparatus that is badly needed, where a municipality hasn't the money to spare?"

Answering this question, the suggestion was made that in some cases a town may establish a five year plan, whereby a certain amount of money is the end of five years will be sufficient to purchase the necessary apparatus.

Other suggestions were offered, but it seems to be the general feeling that the purchase of apparatus where a town is practically broke is an accomplishment which has little chances of fulfillment.

A round table discussion on fire hazards due to installation of air conditioning systems brought forth prolonged discussion. In some cases, particularly in dwellings, the spaces between the studdings and the plaster walls have been used for ducts to carry the conditioned air through a building; in other cases wood ducts have been built, without any fire stops.

In the event of fire, smoke is blown throughout the entire structure, and when the Fire Department arrives, it is difficult to tell where the fire is burning. Furthermore, these ducts aid very materially in spreading the fire throughout a structure. There is an additional hazard to life due to the discharge of smoke and hot gases into all rooms of the house where fire is burning in the basement and where the blower of the air conditioning system is still in operation.

So important was the subject considered that a committee was appointed to make a study of it. This committee is made up as follows: Ex-Chief John Kenlon, New York City, Chairman; Chief Ross B. Davis, Philadelphia; Deputy Chief John J. T. Waldron, New York City; Chief M. E. Clark, Williamsport, Pa., Fred Shepperd, Editor, FIRE ENGINEERING; and Charles Fischer, Consulting Engineer.

Safety at Sea

Former Chief John Kenlon, of the New York Fire Department, presented a very excellent and instructive paper on the Morro Castle fire, particularly reviewing the causes and spread of this fire. Chief Kenlon had served as expert witness in the trial of the officers and officials of the Morro Castle steamship company and furthermore, having served for years as head of the New York Fire Department Marine fleet, as well as being Chief of the Fire Department over 20 years, he was in a particularly good position to offer constructive advice.

Left to Right—Chief Ross B. Davis, President, Eastern Association of Fire Chiefs; Chief Charles E. Clark, Secretary; Chief Arthur Chambers, Yonkers, N. Y.

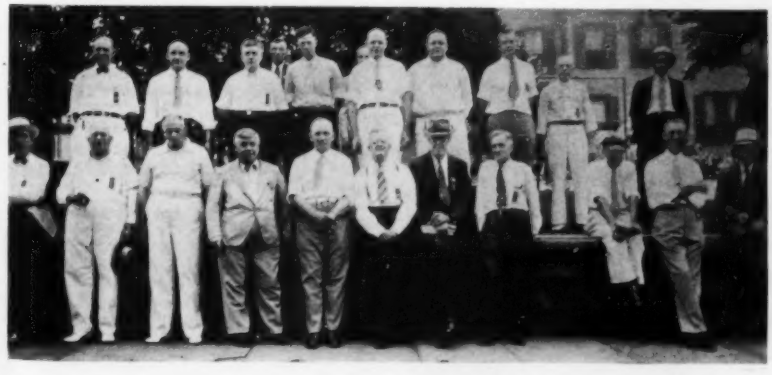
It is his belief that the Morro Castle fire would never have spread from its point of origin had the construction of the ship been thoroughly modern, employing bulkheads without concealed opening, and utilizing fireproof lumber, which will not carry fire. (Chief Kenlon's paper appeared in the July issue of FIRE ENGINEERING).

A paper by Chief Harry Schultz, Johnstown, Pa., on "Fire Hazards in a Flooded City," was accepted, and ordered to be placed in the minutes of the Convention. Chief Schultz was not present to read the paper.

"Suggestions for Fire Prevention and Extinguishment During Time of Floods," presented by Chief Michael E. Clark, Williamsport, Pa., proved a very interesting description of the experiences and observations he made incidental to the flood which inundated a large part of Williamsport early this year.

A second paper on a similar topic entitled "What Fire and Flood has Taught me," by Former Chief Richard L. Smith, Pittsburgh, Pa., was equally interesting and brought forth many points which should prove of great value to Fire Departments located in cities where floods may occur.

Saturday morning's program started off with a paper entitled "Present Status of Fireproofed Lumber," by Ernest F.



A Group of Members at the Convention of the Eastern Association of Fire Chiefs, Poughkeepsie, N. Y., June 24-25. And Was It Hot! Over 100 F. in the Shade.

Hartman, President of the Protexol Corporation, of Kenilworth, N. J. Mr. Hartman reviewed the history of fireproof lumber, and described its present uses and limitation. Fireproofed lumber, labeled by the Underwriters, can now be procured. Mr. Hartman briefly pointed out the tests to which the lumber had been put to procure Underwriters' approval of the methods of treatment.

Unusual Hazards

In a paper entitled "Hazards That May Arise in Any City," Chief Joseph N. Sullivan, of Utica, N. Y., reviewed the recent condition which developed in his city when gas mains ruptured and filled sewers with illuminating gas. Chief Sullivan was unable to be present, and his paper was read by the Secretary.

Chief Arthur Chambers, of Yonkers, N. Y., presented a very interesting paper on "Fire Fighting in London." He compared British and American methods and pointed out ways in which European equipment and methods served more effectively than American methods would in like situations. However, he felt that American apparatus was equally as good, if not better, than British and gave sufficient evidence to carry his argument.

Washington, D. C., was selected for the next convention, the date to be decided by the Directors at their annual meeting.

All present officers were relected as follows:

Chief Ross B. Davis, President; Deputy Chief John J. T. Waldron, Vice-President; Ex-Chief Charles E. Clark, Secretary and Ex-Chief Richard Lee Smith, Treasurer.

CORRESPONDENCE

Fitting the Apparatus to the Department

To the Editor:

I read with much interest the article by Donald Holbrook in the March issue of FIRE ENGINEERING. As Chief of a small department, I heartily endorse his observations regarding apparatus sizes and construction.

The small town needs equipment that is light, easily handled, and with plenty of engine power for hill climbing and for use on unpaved streets.

Our department is provided with three units. One is a large heavy triple combination pumper of 500 g.p.m. capacity. Another is a small light 350 g.p.m. triple combination pumper that is equipped with an oversize engine. This proved to be much the better of the two in all except large fires, for it is faster on the hills, easier to handle, and simpler to operate. Simplicity is the first essential for a volunteer department such as ours.

Our third unit is our solution of the small town ladder truck problem.

After a near disastrous fire in a three-story hotel, we were forced to consider additional ladder equipment. After careful consideration, we decided that all ladder trucks on the market, both city service and aerial, were too large and expensive for our needs.

I designed and built a small aerial that fully meets our needs, and while it may be a rough appearing job, it fitted in with our available funds.

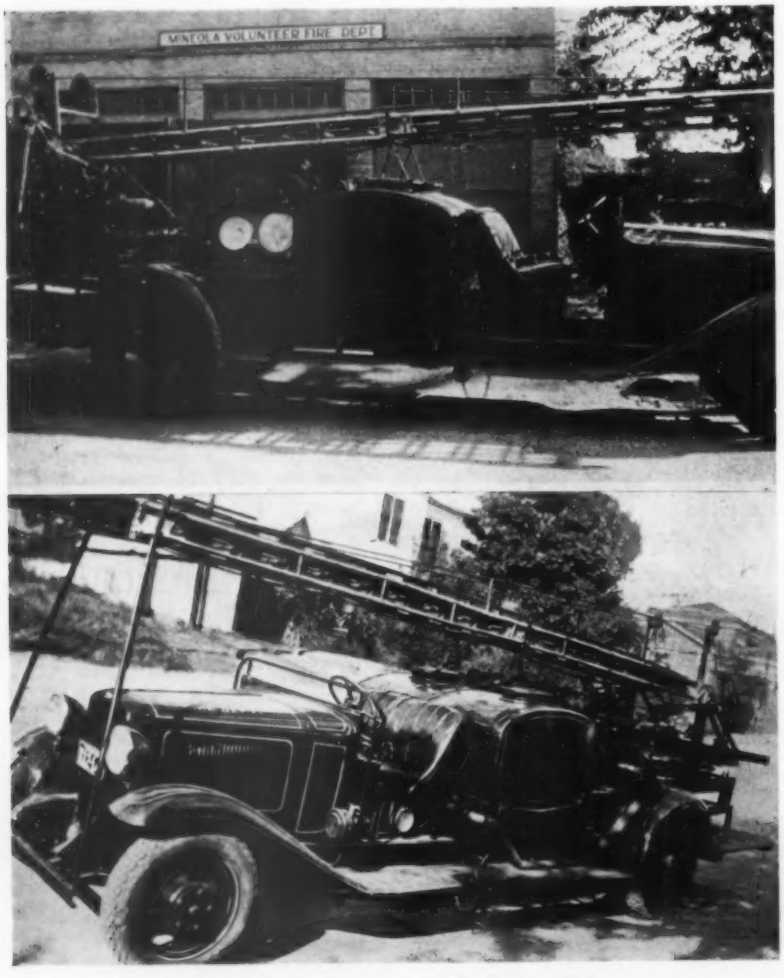
This aerial ladder will reach 47 feet, yet is mounted on a chassis of 157-inch wheelbase. It measures 26¾ feet long from the tip of the ladder to the rear step. The highest point is 7 feet, 8 inches.

The unit has a booster tank of 250 gallons, a 75 g.p.m. pump, and carries both 1½-inch and ¾-inch hose, permanently connected to the pump. The ladder is a combination of power and hand operated. With this apparatus we can have a man with a charged line on the roof of ninety per cent of our buildings in from thirty to forty seconds. It successfully and completely bridges the gap between the time of the arrival of the department, and the time the large lines can be placed in service.

It also has a generating plant and five floodlights. Those of the large departments will laugh at the floodlights, as the lamps have a combined capacity of but 800 watts. However, they provide all the illumination that we need.

With such articles as the one published, apparatus manufacturers may begin to consider the real needs of the modern department.

Yours truly,
W. E. LOTT, JR.,
Chief, Mineola, Tex.



Two Views of the Unique Aerial Truck at Mineola, Tex.

W. E. Ropes President of Washington Firemen

William E. Ropes, Sedro-Woolley, was elected President of the Washington State Firemen's Association at the annual convention held in Tacoma. Representatives were present from British Columbia, Oregon, Idaho, and Montana.

During one evening of the three-day convention, the firemen gave an exhibition of pompier ladder work, rescue and first aid work, and general fire fighting.

Patrick Head of Wyoming Firemen

Chief Justin F. Patrick, of Laramie, Wyo., was elected President of the Colorado State Firemen's Association at a convention held at Thermopolis, Col. The other officers are E. T. Payton, Lusk, First Vice-President; Ed Walsh, Thermopolis, Second Vice-President; M. S. Siray, Rock Springs, Third Vice-President; Gene M. S. Jordan, Wheatland, re-elected Secretary; B. S. Bowman, Wheatland, Treasurer.

THE ROUND TABLE

For Practical Discussion of Current Fire Department and Fire Management Problems

WATER SUPPLY FOR SPRINKLER SYSTEMS

SPRINKLER systems are of little value unless supplied with a plentiful amount of water.

It is important that the Fire Department know the limitations of each sprinkler installation so the officers and men may know how to cope with certain emergencies.

In a general way, it may be stated that Fire Department regulations require that a hose line be laid to the sprinkler system, although the line is not opened unless so ordered by the officer in charge.

In the box on this page is the problem that is discussed in this issue. It is a continuation of the discussion in the previous issue. In the box on the following page is the question that will be presented in the following issue.

Should you have a problem that you would like to see treated in this department, you are invited to write to the "Round Table Editor," FIRE ENGINEERING, 24 West 40th Street, New York, N. Y.

Discussion of the Question

W. G. Lutkey, Chief, Oakland, Calif.: The principal water supply to sprinkler systems in the City of Oakland is from the East Bay Municipal Utility District. We believe that we have in this city the finest water system to be found anywhere in the United States. We have an abundance of water at all times. Most of the sprinkler systems in the city are supplied by pressure or gravity tanks, with pumps in the basements of the buildings where necessary, to safeguard against low pressure on city mains. We have some sprinkler systems that are supplied by wells on their own property and also emergency connection from the city supply.

Our last survey, conducted by the National Board of Fire Underwriters, was in July, 1933, and the fire flow tests in congested high value district where sprinkler systems are installed, showed that we are able to handle a series of large fires without jeopardizing our sprinkler systems.

The departmental rule regarding connecting engine lines to sprinkler siamese is that the fire engine company to arrive immediately connects to the sprinkler siamese.

Edward W. Gieselman, Chief, Syracuse, N. Y.: The principal water supply to sprinkler systems in Syracuse is city water mains.

Insofar as tests are concerned, we have not made any, but we have never encountered an instance where engines robbed sprinkler systems. We have what amounts to an almost inexhaustible supply of water, and the city water system is so laid out that we have an adequate supply of water at all times and under all conditions experienced to date.

We do connect with siamese. We have recently completed an inspection of all connections to sprinkler systems throughout the city.

Edward J. Green, Chief, Steubenville, Ohio: We have two water systems, low and high pressure. About all of the buildings that have sprinklers are connected to the two systems. The high system is about 120 pounds and the low 55 pounds in the districts where the sprinklers are found. We have never had to boost the pressure for the sprinklers. But if we did, and used pumpers, we would use the low pressure and it would not reduce the pressure. But if we used pumpers on the high pressure system that furnishes water for the sprinklers, it would reduce the pressure.

We do not have any set rules for connecting engine lines to sprinkler siamese, as the pressure here is very good. We would use engine lines off the low pressure and leave the high pressure feed the sprinklers.

J. Ray Roe, Chief, Abilene, Texas: All sprinkler systems are supplied by the city water supply.

Officers are required to know size of mains, not only in their own district, but in all the city, and the amount of water that may be obtained from each hydrant. When there is doubt of water supply, steps are taken to guard against shorting sprinkler systems.

The standing order regarding connecting to sprinkler siamese is as follows: First due engine always lays one 2½-inch line to the sprinkle system. In case of a fire next to and exposing a sprinklered building, a 2½-inch line is connected from the nearest engine to siamese of the exposed building.

Companies having sprinkler systems in that district are required to draw plan of buildings showing location of sprinkler equipment and the water distribution to that section. This will prevent the robbing of sprinkler supply. In case of a fire in a sprinklered building the second line is a 2½-inch line siamesed into one 2½-inch line with 1⅛-inch nozzle and 1½-inch line with ⅝-inch nozzle.

W. P. Payne, Chief, Spokane, Wash.: The source of supply for the sprinkler systems in Spokane varies. The lower buildings are supplied direct from separate mains with two six-inch feeders, provided a static pressure of twenty five pounds can be given on the roof of the structure. The taller buildings use automatic fire pumps of 500-gallon capacity, pressure tanks, and elevated tanks of not less than 5,000-gallons capacity.

No actual tests have been made to determine whether fire pumps would rob the sprinkler systems. But the Underwriters have determined through calculation that it would not be possible to lower the sprinkler supply pressure over two pounds. This is due to the high pressure and the large capacity water mains in this city.

There is no standing rule governing the hook-up of engines to sprinkler siameses, other than that the fire company in lays two lines to the standpipe. At the discretion of the Chief or his Assistants, if coonditions justifie it, these lines could be connected to the sprinkler siamese instead.

Robert Jones, Chief, Chattanooga, Tenn.: The principal water supply to sprinkler systems in this city is from water mains of six-inch sizes and larger. There are no taps for such connections permitted above six inches.

Tests are made yearly by the Tennessee Inspection Bureau, for those premises insured under the National Board of Fire Underwriters' group, and at unknown intervals by the representatives of other groups of insurance companies.

The members of this department are given thorough and rigid instructions and training while attending drill school and must go through the routine of connecting engine lines to sprinkler siamese in use on the drill tower. Upon arriving at the scene of a fire, if the building so involved is equipped with sprinkler siamese, and

HERE IS THE PROBLEM

What is the principal water supply to sprinkler systems in your city?

If from water mains, have tests been made to show whether engines will rob the sprinkler system?

What are the rules as to connecting engine lines to sprinkler siamese?

if the fire is of any consequence, engine lines are connected to the siamese.

Lawrence E. Reif, Chief, New Haven, Conn.: Tanks on roof and 4-inch to 6-inch mains leading from our city mains to sprinkler system supply the heads. Most buildings have one or two automatic pumps to maintain pressure.

No tests are made, but we pump direct into the system, so that there isn't any danger of bleeding the system. Most of the buildings have a separate sprinkler connection.

First engine company arriving at the fire must connect to standpipe and sprinker system, if there are two separate connections.

Howard Travers, Chief, Baltimore, Md.: Mains of eight and ten inches diameter supply our sprinkler systems. Tests have been made periodically to determine whether the engine will rob the sprinkler system and the supply was found adequate.

Regulations of the department require hose lines of second engine responding on alarm connected up with sprinkler siamese if use of sprinklers is desired. Operation of sprinkler system is governed by officer in charge of fire and conditions existing at the time.

Isaac M. Hubbard, Chief, Greenwich, Conn.: The water supply to sprinkler system installed is direct to water mains in street. None is supplied by gravity from tank pressure.

No tests have ever been made to show if engines would rob the sprinkler system up to date. But I do know if there was a large fire where engines were pumping from mains, the pressure would not be high enough to permit sprinkler systems to function. That was proven at a recent fire here as buildings connected to mains where pumps were working, were deprived of water for a period of time during the fire.

There are no rules as to connecting engine lines to sprinkler siamese. There are no siamese connections available at the present time to the sprinkler systems whereby engine lines could be connected if needed. That is a matter that should be considered when a sprinkler system is being installed.

Chas. A. Burns, Chief, Little Rock, Ark.: Most of the sprinkler systems in this city are furnished through two sources, regular water mains six inches and larger, and from overhead tanks.

Those having direct main connections and no tanks, have never been tested to see if engines will rob the sprinkler systems.

Any visible indication of fire is sufficient notice to the first engine company to connect to siamese connections.

Henry A. Fox, Chief, Boston, Mass.: Sprinklers receive their supply from the regular water mains. Tests have been made and show that engines will not rob the sprinkler system.

First line from second engine company connects to sprinkler system unless otherwise ordered. If so directed, the third engine company will connect when arriving at a fire.

Ambrose Saricks, Chief, Wilkes Barre, Pa.: The Scranton Spring Brook Water Company supply the sprinkler systems through water mains of various sizes, ranging from four inch to 12-inch.

HERE IS THE PROBLEM FOR THE NEXT ISSUE

What is done to prevent excessive water damage by sprinklers?

Are extra heads carried?

Is sprinkler system put back into service before leaving?

Are department men trained to reset dry valves and other accessories, and fill tanks?

Tests made where there are small water mains indicate that engines do deprive the sprinkler system of sufficient pressure, when connected.

When arriving at a fire, we stretch two lines from hydrant to sprinkler siamese connection. Rolled sections of hose are carried into the building by way of stairs, or elevator if possible, to the floor beneath the fire. We also take along a reducer, spanner, nozzle, axe, claw tool and pipe pole.

James Louis McLane, Chief, Charleston, W. Va.: The principal water supply to sprinkler systems in this city is by direct pressure. We have some tanks elevated above buildings supplied by the same system.

We have not made tests on all buildings, but the Water Department said the water was adequate in case of fire.

The first company to arrive at a fire lays a line from a hydrant to a building and connects to the siamese, then he sets up the pump. Then it awaits orders.

Henry Sager, Chief, Muskogee, Okla.: Sprinkler systems are supplied from the city water mains. Our pressure is 85 pounds at hydrants, which enough for pumpers and sprinklers.

We lay out lines as we go in when answering an alarm, and if sprinklers need boosting we hook up pumpers to sprinkler siamese.

Samuel H. Jeffries, Chief, Wilkinsburg, Pa.: We have only two buildings with sprinklers and they are but two stories high. The sprinklers are on the main water line. The fire hydrant in front of the building where one of the systems is installed, has a pressure of 158 pounds, and the plug supplying the other system has 155 pounds.

W. F. Stronach, Chief, Santa Barbara, Cal.: The principal water supply to sprinkler systems in this city is from city water mains. In fact, all sprinklers are supplied from city mains.

Tests have not been made to show whether engines will rob sprinkler systems. In most cases when sprinklers are installed there is a large amount of water available under high pressure.

There is no set rule as to connecting engine lines to sprinklers. This question is decided by the officer in charge after arriving at a fire.

C. E. Ginther, Chief, Rochester, Minn.: The water supply to sprinkler systems in our city is by direct connections to city mains which have a gravity pressure of 85 pounds at all times. These mains are large enough so that connection of pumpers would not bother sprinkler pressures. The second engine company arriving at a fire connects to the sprinkler.

Chas. L. McCarthy, Chief, Worcester, Mass.: Water mains are the principal supply to sprinkler systems in our city. Engines have not been found robbing sprinkler systems when so connected.

Under ordinary conditions it would not be advisable to connect a sprinkler system to high pressure service. In no case should the pressure exceed 125 pounds. If pressure in the system falls an engine pressure could be increased.

Edward T. Miles, Chief, Newport, Ky.: Water is supplied to sprinkler systems direct from city water mains. The first engine to arrive at the fire connects a line to the sprinkler siamese.

J. E. Held, Chief, Alliance, Ohio: The principal water supply to sprinkler systems is from water mains. Tests have been made of water mains relative to sprinkler systems. At most of the locations, an engine company has been designated to connect up to sprinkler system.

Wm. O'Neill, Chief, Weehawken, N. J.: Water mains are the principal water supply for sprinkler systems. In some parts of our municipality the engines will rob the sprinkler system; in other parts the water mains are larger and the water supply will take care of engines and sprinkler systems.

Two lines are stretched to the sprinkler siamese at a fire.

F. L. Camphion, Chief, Fargo, N. D.: The principal water supply to sprinkler systems in our city is from water mains having 65 pounds pressure and from tanks connected to the mains.

Tests have been made to determine whether or not engines would deprive sprinkler systems, but it has been found that there is plenty of pressure for both.

I would suggest connecting the pumper on a branch main other than one supplying the sprinkler.

Fred T. Schlorf, Chief, Toledo, Ohio: The water supply to sprinkler systems is obtained from the regular water mains. We have never experienced pumping engines robbing the water supply to sprinklers.

The first engine company to arrive at a fire, where there is a sprinkler siamese, makes the connection.

Geo. M. Kellogg, Chief, Sioux City, Iowa: Our principal supply to sprinkler systems is from water mains. We have made tests and find that our engines do not bleed the sprinkler systems. Buildings that are equipped with sprinkler systems in this city are located in most instances where we have laid large water mains.

We have no special rules for connecting engine lines to sprinkler siamese.

Edward J. Hunsinger, Chief, Massillon, Ohio: The water pressure supplying sprinkler systems in our city is 105 to 110 pounds. Tests have not been made to show whether or not engines rob the sprinkler systems, but when pumping from a hydrant, the water supply of the sprinklers will be reduced somewhat.

We very seldom hook-up to pump into sprinklers. It is our custom to use lines direct, if the water supply in sprinklers is sufficient, which has been in all cases to date.

John L. Lucier, Chief, Northampton, Mass.: The principal water supply to sprinkler systems in our city is by gravity at approximately 125 to 135 pounds pressure supplied by 12-inch and 18-inch mains.

We have never made tests to determine whether engines will deprive the sprinkler systems, but consider that the pressure we have will take care of all heads without pump pressure.

We have never found it necessary to connect pumps to sprinklers. There has always been plenty of pressure.

Otto Geisler, Chief, Leavenworth, Kans.: We have no pumps in this city. We have 125 pounds to 150 pounds gravity pressure at all times and can increase same to 155 pounds all over the business district. It is in this district that the few sprinkler systems we have are located.

James Welsh, Chief, Eau Claire, Wis.: Our principal water supply for sprinkler systems is from the water mains. Proper flow tests have been made. In the principal and minor mercantile districts the pressure is quite sufficient to supply the sprinkler systems. One or two spots in the industrial section, however, have poor pressure.

As a rule, the second line would be the proper procedure in connecting engine lines to sprinkler siamese.

John Ely, Chief, Champaign, Ill.: Sprinkler systems in our city are supplied by the water works. We have made tests to show whether engines will divest the sprinkler system, and the tests show negative. We have never connected engine lines to sprinkler siamese.

Frank F. Murphy, Chief, Janesville, Wis.: Water mains are the principal water supply to sprinkler systems in our city. The second line laid for a sprinkler building goes into sprinkler siamese connection.

Chris Smith, Chief, Muskegon, Mich.: Principal water supply in sprinkler system is from city mains. No tests have been made to show if the engine will rob the sprinkler system. We have no rules as to connecting engine line to sprinkler siamese.

E. K. Ingram, Chief, High Point, No. C.: Water mains supply sprinkler systems in our city. Tests have been made to determine whether engines rob the sprinkler systems, but all are okey. Sprinkler siameses are used to the best advantages. When they are not effective, we use lines from engine pumps.

J. J. Kuplic, Chief Manitowoc, Wis.: The principal water supply to sprinkler systems in our city is water mains. The first lines off 1,000-gallon pumper pumps into sprinkler at once when arriving at a fire.

W. E. Holland, Chief, Raleigh, N. C.: Regular water mains supply sprinkler systems in our city. At the last stage of fires the engine lines are connected to sprinkler siamese.

T. R. Hartnett, Chief, Racine, Wis.: Most sprinkler systems are supplied directly from mains. Orders at a fire are to hook up on other mains other than that of sprinkler connection.

I. S. Zorb, Chief, Butler, Pa.: Water mains supply sprinkler systems in our city. The only time they are tested is when they are installed. We have no rules regarding the connecting of engine lines to sprinkler siamese as we have very few sprinkler systems in the city.

The Crime of Arson

(*Continued from page 372*)

that this was her usual custom of making coffee every morning, as she had done so for two months previous to this. A close examination of the electric stove and the coffee pot disclosed no evidence of coffee grounds, nor was the stove overheated.

Serial Number of Stove Checked

The serial number of the stove was taken and it was checked from the manufacturer to a retailer who was located only four doors from the scene of the fire. Records showed that the sale had been made only the day before, so that the wife's theory of making coffee for two months was quickly disproved.

The wife also claimed that two hundred coats and dresses had been destroyed in the fire and there was a vacant place in the showcase which she pointed to. Goods were usually hung on wooden coat hangers with wire hooks and an examination of the ruins disclosed only nine wire hooks, which proved that only nine garments had been destroyed instead of two hundred as she claimed. Express agencies were then checked and a shipment which had been removed from the store a few days prior was then located and quickly identified as goods which had been removed before the fire. The wife was arrested at once.

A search of their room at a local hotel brought to light the price tags which had been removed from the garments that had been taken out prior to the fire. An extension bit, with a splinter attached to the blade, was also found in the room.

Splinter Fits Wood Where Holes Were Bored

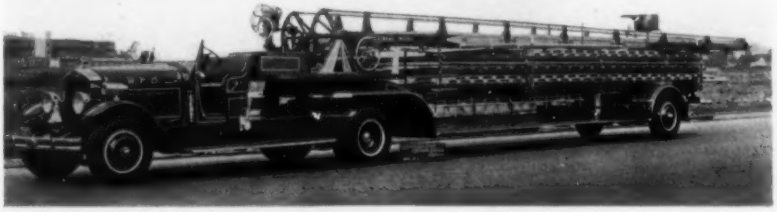
Previously, the discovery had been made, when the firemen removed a carpet on the floor, that many holes had been bored in the floor. It was apparent that this bit had been used to make the holes. In an effort to link this piece of evidence, the investigator started an examination of the holes to ascertain whether or not the splinter came from the floor where the holes had been made. The exact hole was located and the splinter from the blade of the bit fitted nicely into the floor where a hole had been made.

The husband was arrested on his return from New York and released on bail, but when the case was called for trial, they failed to appear. Their photographs and fingerprints were broadcasted by means of circulars. It was then that it was learned that they had a long fire record and were wanted in several parts of the country for previous fires. They were traced throughout twenty-two states in the country and were finally recaptured in Detroit, Mich., returned to Massachusetts and convicted.

Fake Burglary Staged

During their absence, between the time of the first and second arrests, at Chicago, they executed a fake burglary in their shop, having collected a sizeable sum, claiming that the store had been burglarized. These goods, however, had been shipped to Detroit, where they were found at the time of the second arrest.

(*To be continued*)



Aerial Ladder Truck in Service at Windsor, Ont.

An 85-foot aerial ladder was recently placed in service at Windsor, Ont. The city is on the Detroit River opposite Detroit and has a population of 101,000. In July of last year, the municipalities of Sandwich, Windsor, Walkerville and East Windsor were consolidated into the city of Windsor. The city has five modern fire stations with a department personnel of ninety-eight men. The men work on a 2-platoon system. They receive full pay and medical attention when sick or injured, but so far the department does not have a pension system. An analytical laboratory is maintained for checking mixtures for the rescue squad and for determining the nature of gases in sewers, basements, etc. Nine members are detailed to a rescue squad which covers twenty miles of river front. C. J. DeFields is Chief of Department.

NEW ENGLAND FIRE CHIEFS ENJOY CONVENTION AT HARTFORD, CONN.

Conclusion of the Account of the Annual Meeting With Its Outstanding Papers and Fine Exhibits

By Harry Belknap

THE banquet tendered to the New England Association of Fire Chiefs by the Hartford Fire Department was held on Wednesday evening, June 24, in the ball room on the top floor of the Hotel Bond. Over 700 persons attended. Chief John C. Moran acted as Chairman and Clarence T. Hubbard was Toastmaster. The speakers were Colonel Edwin L. Taylor, representing Governor Cross; Alderman John F. Mackey, acting Mayor; Charles B. Whittelsey, Executive Vice-President of the Hartford Chamber of Commerce; Chief George L. Johnson, Waltham; Charles "Sandy" Chapman, of the Gamewell Company; Jay W. Stevens, State Fire Marshal of California; Senator John C. Blackall; Connecticut Insurance Commissioner, and Willard B. Rogers, whose topic was "Selling New England—But Not Short."

The Toastmaster was exceptionally clever and witty and all the speeches were good. Chief Johnson was eloquent in his tribute to Chief Moran, as he presented the latter with a handsome "Half Century Certificate" which bore the following inscription:

"Half Century Certificate, John Condon Moran, Chief, Hartford Fire Department. In recognition of a lifetime devoted to the protection of life and property in your native city—a proud record, a rare privilege, and a splendid achievement. In admiration of your steadfast and courageous adherence to the highest ideals of a noble profession and in appreciation of your hearty co-operation and wise counsel by which we have been enriched and in honor of your half century of service, the New England Association of Fire Chiefs presents you this token of their affection. (Signed.) David H. DeCourcy, President; John W. O'Hearn, Secretary-Treasurer."

Just below was printed the following service record of Chief Moran:

Call man, Feb. 16, 1886; Permanent Fireman, August 20, 1895; Engineer of No. 4, June 28, 1899; Second Deputy Chief, October 15, 1908; First Deputy Chief, May 1, 1912; Chief of Department, Dec. 1, 1913; President, New England Association of Fire Chiefs, 1923-1924.

Chief Moran was also presented with a bronze plaque awarded to Hartford in the National Fire Prevention Contest conducted by the United States Chamber of Commerce, this being the second time that Hartford has won this award. Mrs. Moran was given a huge bouquet of American Beauty roses.

Jay Stevens appointed Harry Belknap, press representative of the New England Association of Fire Chiefs, a Deputy State Fire Marshal of California, and presented him with an official badge.

Charles "Sandy" Chapman ended his speech by singing the old fire song "The Man With The Ladder and The Hose."

Convention Ends on Thursday Afternoon

The final session of the convention was held Thursday morning and lasted until nearly 2 p.m. A paper on "The Behavior of Fire" by Robert T. Hurley was accepted and will be printed in the records and proceedings.

Upon motion by Chief O'Hearn, seconded by Chief Johnson, it was unanimously voted to bestow honorary life-membership upon Ex-Chief Fred A. Leonard, Taunton, Mass.

The report of Secretary-Treasurer John W. O'Hearn was received and showed a total membership of 740, of which 452 are active members.

Chief Oliver T. Sanborn, of Portland, Me., reported for the Auditing Committee.

Work of Jay W. Stevens

Jay W. Stevens, State Fire Marshal of California, gave a review of his activities on the Pacific Coast and declared that politics must be taken out of the fire service. He told of plans being made by the Pacific Coast Chiefs' Association for a special train with school car attached and said that the meetings on the coast were termed conferences rather than conventions.

George W. Austin reported for the Registration Committee and said 712 persons had registered at the desk, this being the largest attendance at any convention except one held in Boston.

Chief Daniel B. Tierney, of Arlington, Mass., reported as Chairman of Exhibits and Chief Joseph W. Randlette, of Richmond, Me., reported for the Committee on Changes in Constitution and By-Laws.

After considerable discussion the recommendation of the committee was adopted, whereby the State Vice-Presidents with the officers will hereafter constitute the Board of Directors.

Election of Officers

The next and final business before adjournment was the election of officers which went through quickly and without any contests.

Upon motion by Past President Koltonski, of Rutland, Vt., First Vice-President Carl D. Stockwell, of Burlington, Vt., was nominated for President and was unanimously elected.

Upon taking over the rostrum he pinned a Past-President's badge upon the retiring head of the association, Chief David H. DeCourcy, of Winchester.

Chief Selden R. Allen, of Brookline, Mass., Past-President of both the International and New England Associations, presented Chief DeCourcy with a clock, in behalf of the New England Association.

Chief Joseph W. Randlette, of Richmond, Me., was advanced from Second to First Vice-President and Chief Thomas F. Burns, of Bridgeport, Conn., was elected Second Vice-President.

Chief O'Hearn was re-elected Secretary-Treasurer and Chief William T. Happny, of Concord, N. H., was elected Sergeant-at-Arms. Chief Daniel B. Tierney was chosen for Director in the International Association.

The following were elected State Vice-Presidents:

Chief Oliver T. Sanborn, Portland, Me.; Chief Charles H. French, Manchester, N. H.; Chief Alfred H. Koltonski, Rutland, Vt.; Chief William C. Mahoney, Peabody, Mass.; Chief Augustin J. Cote, Woonsocket, R. I.; and Chief Michael H. Lawton, Middletown, Conn.

The place for holding next year's convention was left to the Board of Directors.

List of Exhibitors

Following is a list of those exhibiting at the convention:

American-LaFrance & Foamite Industries, Inc.
Buffalo Fire Appliance Corporation.
The Seagrave Corporation.
Maxim Motor Company.
Garrison Engineering Corporation.
Mack Motor Truck Company.
D. B. Smith & Co.
Gorham Fire Equipment Company.
Kramers, Inc.
C. G. Braxmar Company.
Luke Flanagan.
Boston Coupling Company.
Akron Brass Mfg. Company.
Connecticut Fire Equipment Company.
Atlas Fire Equipment Company.
Eureka Fire Hose (Division of U. S. Rubber Products, Inc.)
Samuel Eastman Company.
Stern & Co., Inc.
American Fire Hose Company.
Talk-Alarm Company.
American Fire Equipment Company.
Mine Safety Appliances Company.
Midwestern Manufacturing Company.
Hartford Chamber of Commerce.
City of Hartford.
Veteran Volunteer Firemen's Association of Hartford.
Justin A. McCarthy Company.
McKesson Appliance Company.
Davis Emergency Equipment Company.
Farrar Body Company.
Albert B. Schofield.
United Pyro Chemical Company.
Bi-Lateral Fire Hose Company.
Harry J. Lovell.
Arthur B. Blanchard Company.
Pyrene Manufacturing Company.
Homelite Corporation.
Fog Nozzle Sales Company.
Gamewell Company.
Fabric Fire Hose Company.
National Board of Fire Underwriters.
FIRE ENGINEERING.
Fire Fighting.

The Exhibits

Eight modern pieces of motor fire apparatus, including one ladder truck and seven pumpers, contrasted strongly with an ancient hand engine on exhibition in the state armory at Hartford during the 14th annual convention of the New England Association of Fire Chiefs.

Hose, nozzles, sirens, scaling ladders, life nets, first aid kits, uniforms, badges, fire alarm equipment, and all kinds of fire department supplies and accessories were on view in the big hall.

Chief Daniel B. Tierney, of Arlington, Mass., was chairman of the exhibit committee.

The American-LaFrance and Foamite Industries, Inc., exhibited two triple combination motor pumping engines. Besides the apparatus the firm displayed a complete line of fire department equipment and supplies. The American-LaFrance representatives at the convention included Arthur D. Sullivan, Sales Manager, Elmira, N. Y.; Robert D. Hazard, New York; Lester J. Creaser, Boston; Lawrence J. Carolan, Boston; W. H. Monahan, New Hampshire; Joe Webber, Boston; Ray Slutter, Connecticut; and W. H. Starr, Field Engineer.

The Seagrave Corporation, of Columbus, Ohio, exhibited the latest type of 65 ft. all steel aerial hook and ladder truck. The representatives were Lester Stevenson, Sales Manager, Columbus; Homer M. Havens, Chief Engineer; Jesse Story, New York; Frank E. Taft, of Boston; Howard Ensign, of New York; and

Charles Bloomquist and Philip Putney, of Boston.

The Buffalo Fire Apparatus Corporation had two handsome motor pumping engines on display.

The Maxim Motor Company, of Middleboro, Mass., had on display a new motor-pumping engine for the Center First District in West Hartford, Conn. The company also showed a complete line of fire department supplies, including roof ladders and hose.

The Mack Motor Company showed a motor pumping engine fitted with booster tank and standard hose body.

The Garrison Engineering Corporation, Great Barrington, Mass., showed a new type of fire apparatus equipped with a 500-gallon Waterous pump mounted on a reinforced Ford chassis. The firm also showed various sizes and models of portable appliances for using the Garrison dry method of fire control. The Gartector, an automatic fire detecting and exit control system for public schools and other institutions was also exhibited.

Clarence E. Meek, Vice-President, Garrison Corporation, was in charge of the exhibit, assisted by Walter Trefry, motor apparatus division; J. Arthur Sauter, Manager of the Fire Alarm Division; and Dan R. Campbell, Conn., Distributor.

The Gamewell Company, Newton, Mass., featured the new Vitaguard System which has been developed especially for small municipalities, industrial plants, and institutions. The firm also showed a Peerless master 3 fold fire alarm box and pedestal equipped with the Arrestolarm device. Mobile raido equipment for automobiles consisting of Gamewell-Westinghouse two-way radio telephone sets completed the display. The Gamewell representatives were Edward J. McCarthy, General Sales Manager; Frank M. Tiffany, Charles T. Smith, Russell A. Glenn, Everett L. Angier, Gilbert T. Dunn, Charles "Sandy" Chapman, and George E. Morley, who was in charge of public relations and of arranging the exhibit.

The Talk Alarm Company, Bridgeport, Conn., showed the Talk Alarm which is a loud speaker system for connecting fire headquarters with all fire stations for rapid and distinct voice communication. Richard R. Halpenny, Carl C. Dalgaard, and Alfred A. Robinson, representatives.

The Boston Coupling Company and Akron Brass Manufacturing Company showed a line of brass goods, including nozzles, couplings, deck guns, etc., also first aid kits and a tannic acid spray set for treating burns. C. H. Barker and John J. Barker, Boston Coupling Company, and J. M. Love, of the Akron firm, were in charge of the display. Steiner G. Langher, President of the Akron Brass Manufacturing Company, was a visitor at the convention.

The Samuel Eastman Company, Concord, N. H., showed play pipes and deck guns including the famous Eastman Deluge Sets with three way hose connections. The new nozzle invented by Horace R. Barker, Springfield, Mass., was featured. Walter H. Beane and Mr. Barker were in charge of the exhibit.

The Atlas Fire Equipment Company, of New York, showed the Atlas Life Saving Machine. William Moeller, the inventor and secretary of the firm, was in charge.

The Fabric Fire Hose Company, Sandy Hook, Conn., was represented by Robert M. Wood, Philip A. Wood, O. B. Maxwell, Leon R. Meaney, Percy R. Lewis and William F. Abbott.

The Bi-Lateral Fire Hose Company, of Chicago, Ill., was represented by E. G. Clewley, of Burlington, Vt.

The Eureka Fire Hose Company exhibited its brands of fire hose. President Joseph Green headed the representatives.

The American Fire Hose Company, Philadelphia, Pa., displayed a new linen lined hose. Peter Conley was in charge.

Albert R. Schofield, East Weymouth, Mass., showed engine house lights, with the lettering in white blasted on to red glass, also car and truck flasher lights, the Inter-Communication amplification system, and a model of a Morse water gun.

Luke Flanagan, a retired Battalion Chief of the New York Fire Depatment, exhibited a new type of light weight scaling ladders.

The B. F. Goodrich brands of fire hose were displayed by Harry J. Lovell, New England agent for the firm.

The Justin A. McCarthy Company, Boston, Mass., showed Manhattan fire hose and a line of fire department supplies, including the new Phomaire play pipe and Phomaire hip packs, Evinrude pumps for forest fire duty, Wheat lights, Akron play pipes, siphons, hose bridges, sirens, extinguishers, and Carpenter hand lights. Justin McCarthy, Arthur E. Smith, Albert W. Clifford, and Erlon S. Noyes were in charge.

The Gorham Fire Equipment Company, Boston, had a display of fire helmets, extinguishers, nozzles, sirens, Wheat lights, and various other tools and appliances used in the fire service. Joseph T. Gorham, Harold F. DeCourcy, and Lord W. Briggs, the representatives.

The Arthur H. Blanchard Company, Cambridge, Mass., showed the products of the Boston Woven Hose and Rubber Company and general fire department equipment. Arthur Blanchard, Andrew Deibel, and Frank Grant were in charge.

The American Fire Equipment Company, Boston, among other items featured the Fog Nozzle, Porter bar cutters, Carey cellar pipes, the "Minute Man Hose Bridge" invented by Chief Edward W. Taylor, of Lexington, Mass.; the Federal Traffic Master Light, and the Clark duplex inhalator. John J. Scully, Herbert W. Tracy, James A. McLaughlin, and Leo Gravelle were on hand to show the goods to those interested.

Masks and inhalators were displayed by the Davis Emergency Equipment Company, Inc., New York. Captain L. S. Johnston was in charge.

Kramer's Inc., Hartford, showed Smith and Gray uniforms for firemen.

Various sizes of flood lights for illuminating the scene of operations at night fires were displayed by the Homelite Corporation.

The United Pyro-Chemical Corporation, Lynn, Mass., showed their "Kant-Blaze Fire Blankets."

"The Light From Mars" and Federal Sirens were featured in the exhibit of the Connecticutt Fire Equipment Co.

H and H Inhalators and Burrell All Service Masks were among the items shown by the Mine Safety Appliances Company. Captain Alfred Kinsella, formerly of Rescue Company No. 1, the New York Fire Department, in charge.

The Pyrene Manufacturing Company, Newark, N. J., and the CO_2 Fire Equipment Company showed hand extinguishers of the carbon tetrachloride type and the Phomaire play pipes.

The Farrar Company, Woodville, Mass., showed Barton fire pumps; but this display was delayed in arriving and consequently was not fully placed in position until the final day of the convention.

The usual handsome array of badges and other departmental insignia was shown by the C. G. Braxmar Company, New York. John O. Veit was in charge.

Firemen's rubber coats and equipment were displayed by the Midwestern Manufacturing Company, of Mackinaw, Ill. I. A. Luft, New England representative, was in charge.

Stern & Co., Hartford, showed the Grunow refrigerators. Harry O'Connor, Arthur Webb, and Dr. Jordan, in charge.

Indian fire pumps for fighting brush and woods fires were exhibited by the D. B. Smith Company, of Utica, N. Y.

The National Board of Fire Underwriters displayed samples of fire reports, covering inspections made in a number of cities.

Other exhibitors were the McKesson Appliance Company, the Hartford Chamber of Commerce, Hartford Fire Department, Veteran Volunteer Firemen's Association of Hartford, FIRE ENGINEERING, and Fire Fighting.

An ancient hand engine built in 1793 displayed by the Veteran Volunteer Association created much interest. Old fire hats of the type worn in the period between 1742 and 1856 were shown, also historic pictures of famous Hartford fires. Old leather buckets and silver fire trumpets were also shown.

Martin T. Leamy, Secretary; John F. Hollings, Treasurer; and John T. Dunn, President, the Veterans' Association, were among those at the exhibit hall who were kept busy showing the relics and souvenirs of volunteer fire fighting days in Hartford.

Several large framed groups of fire photographs and flood scenes attracted much attention. Many of these photographs were taken by Fire Commissioner Horace Clark, Hartford.

The Hartford Fire Department had a tapper, tape, and telephone installed in the hall to maintain communication with headquarters.

The booth of the Fog Nozzle Sales Company, Los Angeles, Cal., showed the new device which produces a fine water vapor or fog and has no moving parts in the nozzle.

Outside of the armory near the field where the demonstrations took place a Ward LaFrance 750-gallon pumper equipped with a 150-gallon booster tank was on view. It was built by the Ward LaFrance Company, of Elmira, N. Y.

On the final day of the convention Chief Francis E. Ingals, of the Chaffinch Island Fire Department, Guilford, Conn., drove two of his motor fire trucks to the field in the rear of the armory. This handsome and completely equipped apparatus is privately owned by Mr. Ingals, who answers all calls for aid in the vicinity of Guilford. "Ingals Pumper No. 5" is a 1,000 gallon Maxim motor pumping engine. The other truck is a rescue and hose wagon, with first aid and ambulance kits.

Soldiers Receive Training in Fighting Fires

Soldiers at the Aldershot Camp, England, members of the fire brigade, receive special instruction in fighting fires. The brigade station is manned by soldiers from the different units. Each unit has its own appliances. The men go through drills as part of their training. The members of the units fight small fires until the arrival of apparatus from headquarters. Here soldier-firemen are being instructed in smoke helmet work.

PROMOTIONAL STUDY COURSE

Herein is presented a series of definitions, questions and answers designed to aid fire department officers in preparing themselves for promotional examinations. In this department, which appears monthly, will be included questions typical of examinations held throughout the country.

Definitions

One Piece Company: An engine company eqipped with a single fire truck—usually a triple combination truck.

Two Piece Company: An engine company equipped with a pumper and a hose wagon.

National Standard Couplings: Fire hose couplings wherein those of 2½-inch have 7½ threads per inch, and the 3 and 3½-inch, 6 threads per inch.

Positive Displacement Pump: A pump which discharges a definite quantity of water per revolution regardless of pressure or pump speed. Piston pumps and rotary gear pumps are both positive displacement pumps.

Centrifugal Pump: A pump which employs centrifugal force for creating pressure and discharging water (Centrifugal pumps are not positive displacement pumps.)

Questions

(To be answered in next issue)

1. State in detail the proper method of attaching a line from a pumper to the outlet of a standpipe on the second floor of a building, where the street inlet to the standpipe is out of order.
2. (A) State what is meant by a "moral" fire hazard and give some examples.
   (B) State what is meant by a "physical" fire hazard and give some examples.
3. (A) A 35 ft. ladder is placed against the side of a burning building. Explain how far the foot of the ladder should be placed from the wall and why.
   (B) How many men should it carry safely at one time?
   (C) What precautions are necessary if a line of hose is to be stretched up the ladder and the stream placed into the window; if the ladder is to be used for rescue purposes.

False and True Questions

(Is each statement false or true? Answers in next issue)

4. T F—Discipline enforced without favoritism will usually cause willing and prompt obedience of the rules and regulations.
5. T F—Water is not sucked to the pump, but is forced to the pump by atmospheric pressure when the pressure in the suction hose has been reduced below atmospheric pressure.
6. T F—3½-inch hose weighs approximately 98 lbs. per section.
7. T F—Any cylinder of compressed gas, when exposed to fire, may burst when dropped or exposed to external violence.
8. T F—Fire department pumps are supplied by water in only two ways, by pressure and by drafting.
9. T F—Nitric acid fumes are heavier than air and firemen should walk uprightly when they encounter same and not get down below them, as they try to do in ordinary smoke.
10. T F—One of the first things to do when starting overhauling operations is to relieve the building of water.
11. T F—Dead-lights in sidewalk in front of buildings in which there are cellar fires should never be removed.
12. T F—It is good practice to extinguish basement or sub-cellar fire by taking lines directly down stairways, when it is possible to do so.
13. T F—Fire-foam is very successfully used at aluminum dust fires.
14. T F—Sand is very useful for extinguishing aluminum dust fires.
15. T F—Carbon dioxide and other gases of like weight always seek a high level.
16. T F—Heavier than air gases escape from buildings in a similar manner to that in which water escapes or finds its way out.
17. T F—Burning brands and embers are generally carried to leeward.
18. T F—Proper ventilating of one building may become a hazard to another building some distance away.
19. T F—Firemen working on stairways at the lower levels are rarely benefited by the opening of roof of pent houses.
20. T F—Proper ventilation of a building fully charged with smoke never calls for opening up the roof.
21. T F—Structural conditions of buildings involved sometimes make it impossible for firemen to distribute the water as efficiently as it might be.

Completion Statements

22. ..... are responsible for reckless driving of apparatus on the part of drivers.
23. For extinguishing grease fires ....is a very effective agent if applied over the burning surface.
24. Where nozzle pressures are the same, a small diameter fire stream has a ..... range than a large diameter stream.
25. Four causes of arson are ..... and ..... and ..... and .....
26. For clearing a building of chlorine gas ventilation should be provided at the ..... point.

Answers to Questions in Previous Lesson

1. (A) By voltatile inflammable liquid is meant a liquid which vaporizes readily and which is highly combustible.
(B) By flash point is meant the temperature at which a vapor over a liquid is sufficiently dense to produce a momentary flash or fire.
(C) By fire test is meant test which is applied in determining the flash point and burning point of an inflammable liquid. Five volatile inflammable liquids are: benzine, gasoline, carbon bisulphide (disulphide), ether, alcohol.

2. (A) Fire hazards include possibility of dust explosion, inflammable vapors thrown off by lacquer, varnish, or other liquid used in finishing articles; highly combustible wastes produced in processes of manufacturing; presence of volatile inflammables; stock of raw materials, finished and unfinished articles made of wood; boiler, dry kiln and caul boxes, blower system and shaving vaults, rapidly moving machinery and bearings, glue pots; sanding, filling, painting, varnishing, and upholstery work.
In connection with metal work, explosive metallic dusts may be produced. In addition, the weight of the metal stock is a serious factor in the event of fire.
(B) Auxiliary fire appliances should include sprinkler system, and, if the area is large, standpipe system for operation by Fire Department; foam, carbon dioxide gas extinguishers, or sawdust and soda should be provided where paint and varnish are used in quantities. If metallic powders are produced, and are present in containers, sand should be provided as an extinguishing medium.
(C) Lives of employees should be safeguarded by providing the above appliances, and maintaining good housekeeping within the plant. Aisles leading to exits should always be kept clear, doors unlocked, and the proper fire escapes or fire stairways (properly enclosed) must be provided; exits plainly marked. An automatic alarm system, in connection with the sprinkler system, is essential in giving the employees the maximum of protection. Process must be carried on along lines which have proven safe, and ordinances with regard to safety in such establishments should be rigidly adhered to.

3. There is a possibility of injury due either to striking the rim of the net, striking the ground where the net is held too low (the give of the net permitting this), or landing improperly. By the latter is meant the striking of the net in an improper position by the person jumping.

4. True; 5. True; 6. False; 7. True; 8. True; 9. True; 10. False; 11. True; 12. False; 13. True; 14. False; 15. True; 16. True; 17. True; 18. False; 19. True; 20. True; 21. False.

22. ..... they cannot pay
23. ..... hydrant.
24. ..... grasping the rim, with palms upward.
25. ..... superior officer .....
26 ..... a 2½ to 3-inch increaser .....

Questions with Answers

Question. (a) Name four kinds of ladders used in fire fighting, and state uses to which each kind may be put.
(b) What is the effect of placing the foot of the ladder too far from the building? Too near?
(c) What size ladder would be used to reach the roof of a five-story building, and how far would you place the foot of the ladder from the wall of the building?

Answer. (a) Four kinds of ladders

employed in fire fighting are: Pompier or scaling ladder; roof or hook ladder; ground ladder, single; ground ladder, extension. The scaling ladder is used for reaching floors beyond the reach of the other ladder equipment of the department and where fire escapes are not available. It is also used for mounting obstructions in an emergency such as getting over high walls, etc. The scaling ladder is sometimes employed for opening windows for ventilating, particularly where wired glass is present. In this case, the scaling ladder is used from the floor below the fire floor, and the hook of the ladder is driven into the window pane, and pulled downward, ripping out the glass.

The hook, or roof ladder, is used for operating on inclined or gable roofs. The hooks are placed over the ridges and the ladder laid flat on the roof. In this manner a secure point of operation is provided the men working thereon.

Ground ladder, single, is used for reaching the lower floors of a building.

The extension ladder is commonly employed for reaching the higher floors. Extension ladders also are made in short lengths such as 16-foot extension which are sometimes used inside buildings as well as for reaching the lower floors of a building.

(b) The effect of placing the foot of a ladder too far from a building is to place the ladder under a greater strain than is necessary. A ladder has its greatest strength when vertical. While such position would be impractical in fire fighting operations, the nearer a ladder is placed to vertical the greater will be its strength. If the foot of a ladder is placed too near a building, the ladder becomes unstable, and may fall outward when men begin to climb it. It also makes it much more difficult for the men to climb.

(c) Assuming the height of each story as 12 feet and assuming that a trussed ladder is used, a 65-foot ladder would be required. This is the minimum size which could be used, and it gives but two feet spare length to extend over the roof.

The foot of the ladder would be placed 15 feet from the building. This is found by dividing the length of the ladder by 5, and adding 2 to the result so secured. 65 divided by 5 is 13, plus 2 is 15 feet, the distance which the base of the ladder should be placed from the building.

Abandoned Station Becomes Church

The second floor of the three-story brick fire station of Engine No. 8, on Newfield Avenue, Bridgeport, Conn., which up to two years ago served as the dormitory for members of No. 8 Company, has been transformed into a chapel for St. Mark's Episcopal Church. The box-like structure which was built in 1907 and resounded to the roar of fire apparatus and the wail of sirens up to the time of its closing as an economy move, echoed a new tone on July 19, when first services by Negro Episcopalians were held there. The Board of Fire Commissioners gave permission to use the closed station for religious purposes.

Entrance to the portion of the building devoted to church services is by a side door, near where the "watch" desk formerly stood. Parishioners must wind their way to the chapel by walking a flight of stairs. There are seats for 200 persons. The altar is on a platform between the "bunk room" windows. To the left of the altar is the organ and to the right the choir seats. On both sides of the altar are the sliding poles and "drop" holes where firemen once slid when the bell hit at night.

When the No. 8 station was closed in 1934 by vote of the Fire Commission, the twelve men who comprised both platoons were shifted to other stations about the city. The apparatus was also sent to stations to replace older equipment.

THOMAS F. MAGNER.

Dormitory of Fire Station Transformed Into Negro Episcopal Church

Second floor of No. 8 Engine House, Newfield Avenue, Bridgeport, Conn., an abandoned station. Illustration shows the altar and organ, and also the brass poles down which firemen formerly slid.

Another Department Quits

The entire department of Keosauqua, Ia.—twenty members in all—presented their resignations to the Town Council because, it is claimed, the Council permitted the removal of equipment and tampering with the truck and equipment by unauthorized persons.

The resolution which the men presented asked, "that the Mayor and the Town Council be respectfully requested to take immediate action to install the fire trucks in the quarters recently provided, and that the trucks and equipment be left in sole charge of the men who assume the responsibility for them."

Minnesota Firemen Favor Pension Relief

At the convention of the Minnesota State Firemen's Association held at Caledonia, Minn., a resolution was passed calling for legislation to require a tax levy of one tenth of a mill in all municipalities of the state, for the benefit of the firemen's relief association. They also favored steps to place the relief associations on a firmer financial basis.

During the convention, the office of the State Fire Marshal had an exhibit.

Chief Traeger, Minneapolis, addressed the firemen. He said:

"The picking of jobs by the volunteer firemen during a fire is something to be avoided. Each man should be assigned a post and should stick to it. A fire company must be well organized.

"No one likes a minor role in fighting a fire, especially when a large crowd is watching, but a fireman must consider himself a cog in a machine. If one cog takes a notion to turn the wrong way, something serious may happen."

Attorney General Peterson explained that villages and cities can pass ordinances to compel bystanders to respond at the request of a Chief, to help in fighting a fire.

The new officers are Chief Ross Schmidt, Crookston, President; Chief John Thomson, Wadena, First Vice-President; Fred Pfaender, New Ulm, Secretary; P. N. Pedersen, Moorhead, Treasurer; Chief Charles S. Dailey, Bemidji, Statistician.

Fire-Police Squad

Six specially chosen volunteer firemen form the nucleus of a new type of service for Brighton, N. Y. The group is known as the Fire-Police Squad, and the members will clear traffic and prevent vandalism.

The group will protect apparatus and hose with fusees and lanterns while the apparatus is standing on the highway. They will direct traffic until relieved by the town police or deputy sheriffs. Men not needed for such work will report immediately to the fire-police officer in charge for assignment to other duties. The men must have a good knowledge of first aid work, so that they can take over resuscitation when firemen are needed for other tasks.

The squad was formed in February, 1936. The members are provided with white rubber coats, boots, police whistles, flash lights and special Fire-Police badges. They help protect a highly developed residential community of over 10,000 persons in Monroe County. H. H. Kingston, Jr., is Chief of the Fire-Police Squad, and Captain Roy Draper is next in command.

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified

Finding Values of K

To the Editor:

How do you determine the value of K for hose diameters other than 2½-inch, fitted with nozzles of various sizes? W. P. L.

Answer: To find the value of K for any size hose other than 2½-inch, we take the value of K for the desired size nozzle on 2½-inch and divide by the factor used for converting the hose under consideration to 2½-inch hose.

As an example the factor for converting 2¾-inch hose to 2½-inch hose is 1.66.

If we want to find the value of K for 1¼-inch nozzle on 2¾-inch hose, we first take the value of K for 1¼-inch nozzle on 2½-inch hose, which is .248, and divide this figure by 1.66. The answer, 0.149, is the value of K for 1¼-inch nozzle on 2¾-inch hose.

To find the value of K for any size nozzle on 2½-inch hose, we multiply the nozzle diameter by itself three times and divide by ten.

For example, if we are to find the value of K for 1½-inch nozzle on 2½-inch hose, we proceed as follows:

1½ x 1½ x 1½ x 1½ ÷ 10 equals 0.506.

Pump Supplies Tower and Line

To the Editor:

I would appreciate having the solution to the following published in FIRE ENGINEERING:

A 1,000 gallon pumper is supplying a water tower 55 feet high through two lines of 2½-inch hose each 150 feet long, from a Y connection on a 3-inch pumper outlet, and is also supplying from its other side a single line of 2½-inch hose 200 feet long with a 1¼-inch nozzle. At the water tower, 500 gallons are being delivered at 50 lbs., nozzle pressure. What will be the nozzle pressure on the single line? (Disregard the friction loss in the tower and Y connection.) C. P. J.

Answer: The problem you cite, wherein a 1,000 gallon pumper is supplying both a water tower and hose line is solved as follows:

The engine pressure in the case of the water tower (disregarding friction loss through the Y connection and the friction loss in the mast of the tower) is made up of three factors: the nozzle pressure, the back pressure in the standpipe mast or riser, and the friction loss in the hose line.

The pressure at the water tower nozzle is given as 50 lbs. The nozzle of the water tower is approximately 52 feet above the outlet on the engine, the point at which the engine gauge is placed. This is secured by subtracting from the 55 feet, 3 feet, or the height of the outlet above the street feed.

The back pressure is then 52 x .434. or 22.568, or 22.6 lbs., approximately.

The friction loss in the two parallel 2½-inch lines of hose carrying 500 gallons per minute is 15.2 lbs. per 100 feet.

The friction loss in the 150 feet of parallel 2½-inch lines is, therefore, 1½ x 15.2 or 22.8 lbs.

The engine pressure is then equal to 50 + 22.6 + 22.8 or 95.4 lbs.

If the discharge lines feeding the tower are not throttled, then the pressure within the engine would be 95.4 lbs.

This is the pressure which you would use in solving for the nozzle pressure in the single 200 ft. line of 2½-inch hose.

The solution is as follows:

N.P. = E.P. ÷ (1.1 + K.L.)
= 95.4 ÷ (1.1 + .248 x 4)
= 95.4 ÷ 2.092
= 45.6 lbs. nozzle pressure on the 1¼-inch nozzle.

Capacity of Piston Pump

To the Editor:

In solving for discharge of a piston pump by the following formula, I would like to know why twice the number of revolutions of the pump is used therein:

Capacity = D^2 x .7854 x the length of the stroke, divided by 231 (the cubic inches in a gallon) x twice the number of revolutions of the pump.

I can readily understand this formula if the pump is double acting, but in one such problem it was solved by the above formula and in addition, the displacement was multiplied by two to allow for both sides of the piston.

Here is a sample problem:

A gasoline driven piston pump; bore 6½ x 4-inch stroke; pump speed 300 r.p.m. What is the discharge?

The problem does not state the number of pistons or whether the pump is single or double acting. In solving for discharge, revolutions per minute are doubled. Can you tell me why the pump speed should be doubled if it is not a double action pump? M. D. W.

Answer: In the solution referred to for the discharge of a piston pump, it is assumed that the pump is double acting. Whether we double the number of revolutions or double the displacement per stroke, the result is the same. In the former case, it really amounts to considering the engine running twice as fast, working single action.

On the other hand, if we take the displacement per revolution, which will be approximately twice the capacity of the cylinder (assuming no clearance) then it will only be necessary to take the displacement per revolution, we can the number of revolutions and knowing get the discharge very readily. Actually there is a correction necessary in the case of double acting pumps, for the pump rod takes up a certain amount of space, and a correction for this must be made. Thus it would be better to take the actual displacement, both on the head and rod sides, and then find the discharge based on the number of revolutions given.

Pressure Loss in Line

To the Editor:

As a subscriber to FIRE ENGINEERING, I would be grateful for an answer to the following question:

Let us suppose that there are 400 feet of 2½-inch hose stretched, equipped with 1¼-inch nozzle; 45 lbs. nozzle pressure; approximately 300 gallons flowing; and 140 pounds on the engine.

Will the pressure on the hose be different at each 100 feet inasmuch as there are 21 lbs. loss on each 100 feet as you go away from the engine to the nozzle?

Say at the first 100 feet away from the engine, the pressure on the hose drops to 119 lbs., at the second 100 feet, to 98 lbs., etc., to the nozzle.

Another member of this company maintains the pressure on the hose is equal throughout the entire 400 feet as the velocity of the water going through is the same throughout the entire length of the stretch. B. R.

Answer: Your contention is correct. Pressure is actually lost in the hose line, so that as you approach the nozzle you have a diminution of pressure. For example, if the flow through a line of 2½-inch hose is 200 g.p.m., we have a friction loss of approximatey 10.1 pounds per 100 feet. If the pressure at the engine is 150 pounds, at the end of the first 100 foot line of hose you would have 139.9 pounds. At the end of each succeeding section the pressure would drop 10.1 pounds.

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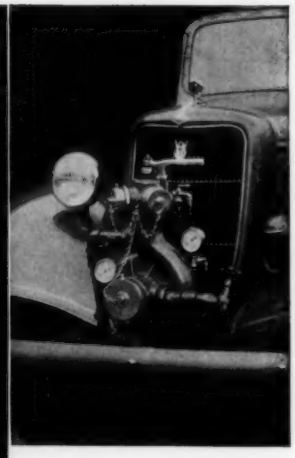
Wide Open! —Full Capacity —250 Pounds Pressure YET LOW MOTOR SPEEDS



Barton U-Type Pumps are built in 350, 400, 500 and 600-gallon sizes. A pump for every need and pocketbook — and we have other models at still lower prices.

NO STRAIN ON MOTOR —IT LOAFS ALONG!

Barton U-Type Fire Pumps are designed to protect the truck motor against the wear and tear of excessive speeds. They are regularly equipped with a BUILT-IN GEAR DRIVE which reduces motor speed to approximately ONE-HALF of pump speed.

Thus you can turn a Barton U-Type Pump wide open—get every possible gallon of water at 250 pounds pressure—YET THE MOTOR LOAFS ALONG UNDER NO STRAIN. Think what this means in the way of long motor life!

AND FRONT-MOUNTING SAVES PLENTY

Another thing to bear in mind is Front-Mounting. To install a Barton U-Type Fire Pump on the front of any standard truck requires NOT ONE CHASSIS CHANGE. In fact, the entire installation job can be done by any good mechanic in a few hours—COSTING BUT A FEW DOLLARS.

Before you buy any fire pump, be sure you know about this Barton U-Type Centrifugal. It has passed all Underwriters' tests—handles clean or DIRTY water—automatically primed.

Mail coupon below and get FREE copy of our new Catalog. It gives full details, and includes VALUABLE FIRE STREAM DATA that you can use time and again.

BARTON FIRE PUMPS

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Send me your FREE Catalog 75 covering Barton U-Type Fire Pumps and including VALUABLE FIRE STREAM DATA.

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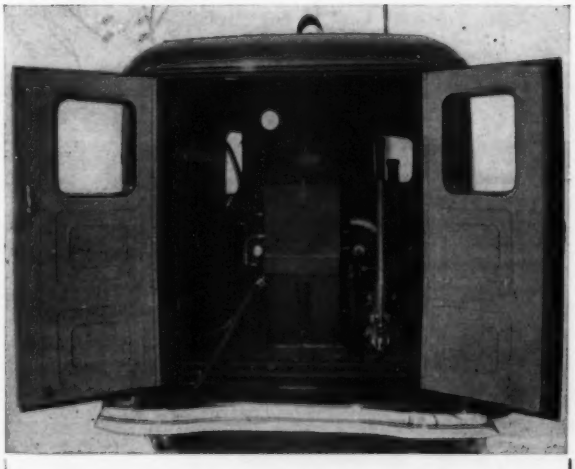

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A compact, dependable and highly efficient oil burning steam generator that thaws frozen hydrants in about 2 minutes. An indispensable piece of equipment for every fire department. Valuable, too, in keeping fire apparatus free of ice. New York Fire Department has 15 of these units in service.

Don't be caught napping next winter — investigate the Bryan Steam Thawing Unit now.

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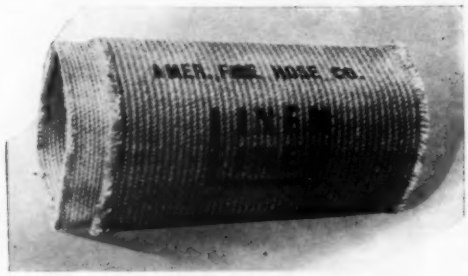
Once Again—

Fire Chiefs Give
Enthusiastic Applause
To the Advent of

LINEN-LINED HOSE



AT the Toronto convention, LINEN-LINED Hose got a reception that was beyond even our fondest expectations. Scores upon scores of progressive fire officials, after visiting our exhibit and witnessing our demonstrations, expressed the opinion that LINEN-LINED is the type of hose fire departments everywhere will eventually adopt. Several placed substantial trial orders right on the spot. Many others plan to buy shortly. Without exception, LINEN-LINED Hose received wholehearted approval.

If you believe in keeping abreast of the times, it will pay you to know more about LINEN-LINED, the modern hose for the modern fire department. Write for descriptive data.

- LIGHTER
- STRONGER
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- MILDEW-PROOF
- LOW COST
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Is Made of Vanitex, the soft, flexible, long wearing, waterproof Material?
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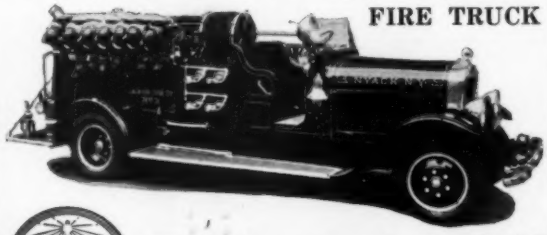

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150 pounds or more of carbon-dioxide is available for instant action.

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Our engineers will gladly give you a survey and give you FULL PARTICULARS. Replace obsolete sirens with Fedelcode full-weatherproof Sirens—Rugged—Compact.

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"A SIREN for Every Purpose"

No. 7 Fedelcode — No. 5 Fedelcode — No. 3 Fedelcode — No. 2 Fedelcode

Our inquiring reporter overhauls the firemanic news of the day.

"Diogenes" Pulls Seven False Alarms

John Gleason 30, emulated Diogenes, but instead of hunting an honest man he took a red lantern and went hunting red fire-boxes. He found 'em and pulled seven, five minutes apart, before a cop pinched him. All this happened in N.Y.F.D.'s busy 4th. Battalion in the lower East side. Battalion Chief Stephen Mack learned of Diogenes and his red lantern and soon 50 firemen and 25 patrolmen were searching for him. After the seventh phoney an eagle-eyed cop nabbed him, as he was pulling another —this time without his lantern. Bail was $200.

8,000 Respond to Chimney Fire Alarm

Flames shooting 100 ft. from stack of municipal power plant at Freeport (L. I.) resulted in rush of thousands from nearby town—and Freeport F.D., which found nothing to do but wait 'till carbon burned itself out. Jam caused traffic snarl that took hours to untangle.

Town's Firemen Strike on Where to House Truck

Mayor W. B. Newbold, Keosauqua (Ia.), warned 1,000 residents of his community not to smoke in bed, upset kerosene lamps, burn rubbish or otherwise flirt with fire until the "Council" settled "strike" of the town's Vol F.D. Seems that firemen, 20 of 'em, struck after row with Council as to what garage fire truck should be housed in. J. G. Russell, Chief, refused to accept Council's choice of garage and said "we won't answer a fire alarm until this matter is settled." Our correspondent hasn't advised us of outcome.

Orchids to Columbus (O.) Firemen

Depression made it necessary to lay off 30 firemen (short-sighted voters turning down a three-mill levy needed to keep up F.D.) but when 3-alarm fire destroyed furniture company warehouse, forcing out residents of nearby apartments, these 30 aided the entire downtown fire force in fighting the fire. What Walt' Winchell would have said about short-sighted Columbus citizenry!

Firemen to Be Jailers?

Mayor Meri Weiger proposed to Council of Bay Village (near Cleveland, Ohio) that the jail's portable cells be taken from old location and put in basement of F.D.'s section of new Town Hall. Our correspondent says reason is that "firemen can better cool off the bad men." He failed to tell us what firemen thought about it.

Month's Tall "Tale"

George C. Tichert (Hon. Battalion Chief, L. A. F.D.), Los Angeles (Cal.), vouches for this. A raging forest fire, which for time threatened to destroy entire San Bernardino national forest, was started when a rabbit, its tail ablaze, leaped from a pile of rubbish being burned by section hands of Santa Fe R.R. and jumped into the tinder-like brush. As it raced up mountainside its tail ignited dry brush and left fiery trail. A 20-mile breeze did the rest. It was only 105 in the shade, too. As to what became of Bre'r Rabbit deponent sayeth not. But he did send us a "hot sketch" of the "firebug" sitting in a fire-bucket!

News Flashes

After $100,000 fire in home of Carl H. Pforzheimer in Purchase (N. Y.), which required apparatus from four cities and towns, the community of Purchase voted to buy regular fire protection from Port Chester F. D.—it having no department of its own. . . . Chief Frank Davis, Danville (Ill.) mourns loss of $30. Seems he heard broadcast of a robbery, encountered robber's truck, stopped it; crooks liked Chief's car better than their own, forced him to drive them around town, took his roll, and beat it. . . . Short-circuit caused fire in gold vaults of Bank of England; firemen wearing gas masks extinguished fire, but were no richer as result. . . . Canadian Fire Marshal issued warning *not to stroke cat in neighborhood of gasoline.* . . . A movie crew making "The Charge of the Light Brigade" on location, Lone Pine (Cal.), formed bucket brigade, helped subdue fire in restaurant, which threatened to get out of control. . . . In Ceresco (Mich.) 40 women did same thing—fought blaze which, starting from bonfire, started spreading through town. . . . During a Bulgarian storm 20 were killed by lightning. . . . When Fire Chief & Commissioner J. J. McElligott (N. Y. F. D.) decided to hold recent exhibition of new and old apparatus, the show was nearly spoiled because horses couldn't be found to pull old engines. City Park Dep't stables were empty. However, Commissioner-Chief and aides managed to scare up nags for occasion. . . . Rev. B. J. Ryan, Catholic Chaplain at Long Island Hospital, Boston (Mass.), stopped administering last rites of church to dying man long enough to beat out fire in curtain caused by gust of wind and candle.

Believe It or Not—

An electric flat iron left turned on in home of Isador Tishler (Rochester, N. Y.) burned through the ironing board and kitchen floor and then fell into a laundry tub in basement. Now you tell one!

Dreams of Rain—Finds Fire

Mrs. Catherine Capone, Portsmouth (N. H.), dreamed of rain. In dream decided she must get up and shut windows. Got up—and awakened just in time to save her four children from flames sweeping kitchen beneath them. Dog was lost in the fire, which Chief R. William F. Wood claimed was caused by fireworks.

Here's Another Ripley!

Our New England scout reports that when firemen of a New England town went to work on 2-alarm fire in rag-shop district, kerosene was sprayed from nozzle! Investigation proved oil had been placed in hydrant by Water Dep't to prevent rusting and freezing of valves. Well, well!

"Hot" Wrestling Match

Here's one kind of "match" that started fire! Wrestler Abe Stein (Boston, Mass.) got wrestler Gene Dubuc in tight grip. Latter produced match from his belt and set fire to Stein's trunks. Stein shrieked, leaped to feet, beating out flames with hands while crowd cheered. Dubuc surrendered matches to referee; bout was resumed, Stein winning.

Overtrained

For weeks Alviso (Cal.) F.D. Vols had dashed about town in their new equipment training for fire that must surely come. It came, at the Gallaher ranch—but firemen came not, the practice runs having used up all the department's gasoline.

Fireman Ducks "Dog-Daze" Duties

Nelson Stone is regular "one-man band" of town of Dayton (Ky.). He is full-time worker in city F.D.; driver, city ambulance; instructor in F.D. life-saving class; substitute police patrolman and ass't. collector city taxes. When saddled with job of dog tax collector, Stone said "that's too much—especially in hot weather!"—and quit.

"Jinx" Follows Engine Four!

An accident sent Engine 4's apparatus (Yonkers, N. Y.) to Elmira factory. Following the accident, replacement engine soon after was rammed by truck. Second accident occurred a few hours before Common Council met at City Hall and voted to pay "not more than $5,500 for the damage to first engine." Colored driver of colliding truck got summons—Engine 4's drivers got the jitters.

Firemen Fed for Services

It pays to go to fires, says Harwich (Mass.) firemen. They were called to extinguish chimney fire, but before they left, not only had doused a fire on roof of adjoining hotel, but were treated to a beefsteak dinner.

Orchids to This Lad!

Fred Bosbane, Jr., aged 6, was burned on arms and face in rescuing two younger sisters when fire swept their home. Fred carried them from second floor to safety.

A 'Feint' Fire

Chief Rufus A. Chittenden, Haverhill (Mass.) tells this'un: When trucks answered a fire call there they couldn't find the fire. Finally located the woman who rang alarm. She apologized and said: "It's all right. I thought my friend was dead, but he only fainted."

Some New Jersey Chiefs Look Over the Demonstrations.

I. A. F. C. Continues Its Advance

(*Continued from page 378*)

car, provided for that purpose on the train, utilizing the latest methods of vocational training and having Chief Ralph J. Scott, of Los Angeles, as a conference leader, and

WHEREAS these meetings were of immense educational value to those participating, and

WHEREAS a permanent record was kept of all matters discussed, and decisions reached, in order that this valuable knowledge may be passed on to all Fire Departments who were not fortunate enough to have their Chiefs in attendance, now therefore

BE IT RESOLVED that the holding of these meetings and thus utilizing travel time is a great innovation and

BE IT FURTHER RESOLVED that in the future, when Fire Chiefs travel together, the same program be recommended.

Banning the Use of Red Color

A resolution of the Pacific Coast Association of Fire Chiefs recommended for adoption by the International Association of Fire Chiefs:

WHEREAS the members of this organization unanimously condemn the use of red lights, other than tail lights, and the use of the color red on vehicles other than emergency vehicles, believing these practices to be unsafe and a contributing cause to the many fatal accidents occurring during emergency runs, and

WHEREAS the promiscuous use and lack of regulation of illuminated red signs on building fronts also tends to increase the hazards present during the operation of emergency vehicles, and

WHEREAS the success of legislation lessening the said hazards is dependent in a large measure on such regulations being adopted generally throughout the land, now therefore

BE IT RESOLVED that this organization favors the passing of proper legislation prohibiting the use of red lights, other than tail lights, and the color red on all vehicles, other than emergency vehicles, and

BE IT FURTHER RESOLVED that this organization favors passing of proper legislation regulating illuminated red signs on building fronts with a view of lessening the hazard therefrom, and

BE IT STILL FURTHER RESOLVED that a copy of this resolution be submitted to the International Association of Fire Chiefs for their consideration with a view of appointing a committee to study these matters carefully and submit sample laws to the various Associations making up the International Association of Fire Chiefs for their general adoption.

Protest Against "Courses of Instruction," Prepared by Those Unequipped for the Work

WHEREAS, the officers of this Association have been reliably informed that an organization, national in scope, but with a staff including no members experienced in fire fighting, is engaged in the formulation of a course of instruction for members of municipal fire departments, and which course is intended for submission to fire department schools throughout the country, and

WHEREAS, the very successful progress of the fire school movement in recent years is due to the work of the Educational Committee of the International Association of Fire Chiefs, in cooperation with the Federal Board for Vocational Education and the various State Boards of Vocational Education, and

WHEREAS, the Directors of this Association firmly believe that the ends of such schools are best served only where experienced fire fighters determine the make-up of such courses,

THEREFORE, be it resolved that this Association vigorously protest the incursion of that, or any other organization, into this activity so intimately concerned with the future efficiency and improvement of the fire service.

Proceedings — with other snap shots of Convention — concluded next issue.

A Convention Trip School

The Pacific Coast delegation to the International Association of Fire Chiefs Convention instituted a novelty which may have considerable bearing on the future conduct of special trains to Fire Chiefs' Conventions. It consisted of a school, conducted by capable instructors, for the delegates enroute to the Convention. Each day the delegates assembled in the school car and entered into discussion of pre-determined topics. A record was kept of these discussions.

Topics included in the conference aboard the special train from the coast to Toronto were: Linen hose in the fire service; increasing the capacity and pressure of individual fire engines; use of sectional metal ladders; enclosed bodies on fire apparatus; phantom fire alarm boxes; standardization of fire service equipment; uniformed firemen for night district patrol duty; inspection of places of public assembly when in operation; fire department activities in the event of disaster; traffic problems and the fire service; fire department auxiliary power equipment; providing an association home for aged and infirm firemen, and the eight hour day firemen.

This trip was particularly instructive, for in addition to the school conducted aboard the train, the Chiefs paid a visit to the Underwriter's Laboratories in Chicago, and on the return, to the Detroit Fire Department training school.

At the Underwriter's Laboratories the delegates witnessed laboratory tests on fire hose, hydrants, fire extinguishers, and automatic sprinklers. During the tour through the various laboratories, short talks on the engineering of fire prevention and fire protection were given by laboratory instructors. A spectacular test of a fire door was also shown. This test was conducted in a large gas-fired furnace, the largest of its kind in the country.

The final demonstration by the Laboratory engineers was the test of a fire extinguisher which, in the hands of an expert, was used to attack a burning 100 square foot oil soaked panel of wood.

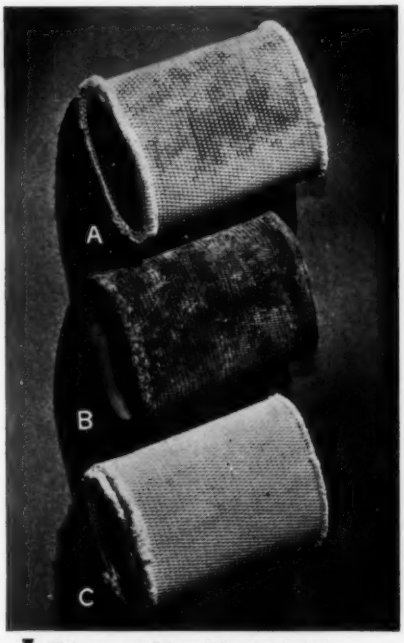
As indicated in the report of the convention, a resolution passed by the Pacific Coast Association of Fire Chiefs, was presented at the International Convention recommending the adoption of the school car idea where large parties go in a body to the annual conventions.

The School Car Used by the Pacific Coast Chiefs for Instruction While Enroute to Toronto

NO SIGN OF MILDEW
AFTER BEING
PROVAR PROCESSED

★ Saturated with water and exposed for six months to warm, moist atmosphere, Republic PROVAR PROCESSED Fire Hose showed no signs of mildew, no discoloration, no loss of strength or quality. The PROVAR PROCESS is an exclusive method of treating fire hose for mildew protection—far superior to any previous effort by any other manufacturer.

The PROVAR PROCESS is permanent—will not wash out. It means longer life to your hose, greater economy, greater safety, and—the price is the same as regular hose!



A Not processed for mildew protection.
B Processed for mildew protection by a competitor.
C PROVAR PROCESSED Republic Fire Hose —no sign of mildew.

• • •

Unretouched photo showing results after samples were saturated with water and exposed to moist atmosphere for six months.

THE REPUBLIC RUBBER CO.
YOUNGSTOWN, OHIO

Republic **FIRE HOSE**

Why Westwood Chose a HOMELITE

A Homelite is the handiest floodlight system a fire department can have. It's low in cost—generates 1250 watts, enough to operate several brilliant floodlights—and it weighs only 89 pounds complete with built-in gasoline engine. One can carry it easily and set it up quickly right where your men need it most. *No long cables are necessary.*

The Homelite floodlighting plant is unusually rugged and dependable. It starts instantly in any weather and needs no attention after starting. Voltage is held at 110 automatically. Air cooled engine can't overheat, flood or freeze. The complete plant is waterproof, dustproof and oilproof.

Send for bulletin.

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AFTER all, a good badge is a sensible investment. Not everyone can wear a fireman's emblem of service. You men who have devoted your lives to saving life and property should be proud of your badge.

You will be if you wear a BRAXMAR BADGE. Over fifty-five years of experience goes into every badge you buy.

Catalog on request.

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BRAXMAR BADGES
Standard for Over Fifty Years

ATLAS

The World's Newest and Safest

LIFE NETS

Used By New York City Fire Dept.

THE life net comes into play only when you need it—and when you need it you need a *good one*. ATLAS nets are the last word in design and construction. They are the world's safest nets. Eminent fire engineers agree on this. There are two models. One folds in half for use on aerials and another that folds in quarters for use on pumpers and smaller apparatus.

We'll be glad to mail you complete facts and prices on request.

Scene shows the ATLAS LIFE NET being used at the New York Fire Dept. drama — "Midnight Alarm" . . . .

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The increasing demand for ATLAS LIFE NETS makes it necessary to add to our dealers. Write for proposition.

ATLAS FIRE EQUIPMENT CO.
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Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

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Waterford, N. Y.
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You'll Feel
A HEAP SAFER
with
COVER'S DUPOR
Two-Sponge
Practical Pocket
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$24 Dozen
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H. S. COVER
Station A
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Sensational NEW Midship Champion

Only $535

Type NHF500 Only **$535** Complete

Ready to mount on Ford V8, Chevrolet, International, Dodge

Make Your Own 30-Day Free Test

We'll ship you the pump, any local dealer will loan you a chassis.

Write for Special NEW No. 106 Salesbook of Champion Front and Midship Fire Pumps and Fire Apparatus, beautifully illustrated in colors.

A totally new achievement in centrifugal Fire Pump design by Darley engineers.

Weighs only 375 lbs.—specially engineered and built for mounting on 1½-2 ton standard truck chassis without overloading.

Direct drive off chassis propeller shaft. No gears. Simple and dependable. Nothing to go wrong.

Unconditionally Guaranteed for 10 Years.

Meets all requirements of the Underwriters and all State Actuarial Bureaus for 500 GPM Fire Pumps. But actually delivers 600 GPM at suction and 800 GPM from fair hydrants. Automatic Vacuum Primer.

Easily installed without mutilating chassis. Pump fits into the space now occupied by short shaft which connects propeller shaft with transmission. Installation completed in an hour's time.

You can mount the new Champion Midship Fire Pump temporarily on a chassis and make your own tests. If the Champion does not perform fully to your expectations it can easily be removed from chassis and we want you to return it and we will send your money back.

Complete, ready to mount, with Gauges, Booster Valves, etc.

W. S. DARLEY & CO.
2810 Washington Blvd. Chicago, U. S. A.

Mainzer, Fire Buff, Dead

Robert H. Mainzer, millionaire banker of New York City, and well known both in this country and abroad for his activities as a fire buff, died at his summer home Gem Farm, Bethlehem, Conn., on August 6, at the age of sixty-one. He recently estimated that he had attended 7,500 fires, and had assisted at many rescues.

The Late Robert H. Mainzer

He was born in New York and attended Amherst College, where he graduated in 1895, a classmate of the late President Calvin Coolidge and Dwight W. Morrow. He took post graduate work abroad, and entered the banking firm of Hallgarten & Co., New York, of which his father was a founder.

In 1913, Mr. Mainzer was named Honorary Battalion Chief, and from that time on, at his own expense, he has maintained a fire alarm signal both at his home and office. No matter what hour, he responded to all major alarms. It was as the result of his studies in Europe that the first rescue squad was started in New York City in 1915. Twelve years ago he advocated the use of radios in chief officers' cars, and was one of the first to emphasize the need for oxygen masks and folding ladder escapes.

Although little was heard of his philanthropies, it was known that whenever a firemen was killed in action, he visited the home and left one hundred dollars for the family. Sick firemen were also visited.

Mr. Mainzer was divorced from his first wife in 1928, and that year married Grace Evelyn Burton. Beside his widow, he is survived by his mother and a sister.

Kavanagh, Chief of Amsterdam, N. Y.

Assistant Chief Matthew J. Kavanagh, of the Amsterdam, N. Y., Fire Department, has been advanced to Chief to fill the vacancy caused by the death of the late Chief James J. Stewart a few months ago.

He entered the department on September 11, 1903. On March 15, 1930, he was promoted to the rank of Assistant Chief.

Capt. Louis H. Conrad, who has been promoted to Assistant Chief, has been with the department for nearly twenty-five years. He has served as Captain for the past nine years.

North Dakota Firemen Meet

At the convention of the North Dakota Volunteer Firemen's Association held at Oakes, resolutions were adopted asking for legislation for a fire prevention course in North Dakota schools; legislation for providing civil service requirements, optional, in the employment of city firemen; proper protection for state volunteer departments, and their men and families, through compensation. The 1937 convention will be held at Walhalla.

Pacific Coast Chiefs Meet

The forty-third annual meeting of the Pacific Coast Association of Fire Chiefs was held at Seattle, Wash., July 20 to 23.

Chief L. B. Canfield, Beverly Hills, was elected President; Chief W. S. Knight, Salt Lake City, Utah, First Vice-President; Chief W. R. Williams, Fresno, Second Vice-President, and Jay M. Stevens, San Francisco, re-elected Secretary.

The Chiefs were welcomed by Mayor John F. Dore, who complimented the firemen on their work. The next convention will be held at Spokane, Wash.

Dillon, Chief of Binghamton, N.Y.

Asst. Chief Arthur J. Dillon, of Binghamton, N. Y., has been promoted to head of the department, effective August 1.

He joined the Independent Hose Company No. 5 on August 14, 1906, and was appointed fireman on July 1, 1909. He was advanced to Captain on November 4, 1915; Fire Marshal, August 1, 1922; Battalion Chief, April 10, 1925; Second Assistant Chief, May 2, 1927; First Assistant Chief, November 1, 1928.

Chief Dillon is fifty-two years old.

To fill the vacancy caused by the promotion of Chief Dillon, William D. Thomas, Second Assistant Chief, was promoted to First Assistant Chief.

He became a fireman on July 1, 1911; Lieutenant, January 15, 1917; Captain, January 1, 1918; Battalion Chief, May 2, 1927; Second Assistant Chief, November 1, 1928; First Assistant Chief, August 1, 1936. He is forty-six years old.

Gases, Chemicals and Hazardous Materials

Owing to lack of space in this issue it has been found necessary to omit the installment of the series on "Gases, Chemicals and Hazardous Materials." This series will be resumed in the September issue.

Ft. Plain Has 100th Anniversary

Special exercises were arranged at Ft. Plain, N. Y., to commemorate the one hundredth anniversary of the Fire Department. A number of the former Chiefs were present to review the parade, and the evening program.

Department and Other Reports Received

West Virginia Fire School—Proceedings of the Fifth Annual Fire Service Extension School, West Virginia University. Edited by Prof. L. V. Carpenter; seventy-eight pages.

Philadelphia Fire Insurance Patrol—Sixty-sixth annual report of the Fire Insurance Patrol, Philadelphia, Pa.; twenty-nine pages.

Duluth, Minn.—Annual report of the Fire Department, Duluth, Minn.; twenty typewritten pages.

The One-Man Fire Department of Chaffinch Island

Many communities cannot boast of the fire protection that is afforded the community of Chaffinch Island which is one of the smallest populated districts to have a recognized Fire Department. Chief Francis E. Ingals is shown with his new Maxim apparatus. What the department lacks in personnel, it appears to make up in the number of apparatus units.

WHAT'S BURNING

THE following list includes fires of $50,000 loss and over in the United States and Canada, for the month of July, 1936. These figures, compiled from the telegraphic reports, are based on estimates made at the time, and are subject to later investigations and consequent revision. Taken as a whole, however, they are an approximately correct view of the losses incurred. The figures represent loss in thousands of dollars.

Month Ending July 31	Loss in Thousands of Dollars
Dubuque, Iowa—Laboratory of Visitation Academy and other college buildings	$50
Jefferson, Wis.—Elevator of Ladish-Stopenbach Malting Co.	125
Cairo, N. Y.—Rockwood Country Club, hotel bldg.	170
Blue Ridge, Ga.—Fannin County Courthouse destroyed	50
Mobile, Ala.—Property of Marine Specialty Co., Inc.	250
Tampa, Fla.—Burlap bag factory and adj. dwellings	50
Phoenix, Ariz.—Korrick's department store damaged	50
Syracuse, N. Y.—Two bldgs. of Syracuse Milling Co.	50
Bellaire, Ohio—McGraw garage destroyed	70
Newport, Vt.—Green & Burroughs block destroyed	50
Remsen, Iowa—Business and residential property	400
St. Joseph, Ill.—Roundhouse of Chicago, Rock Island & Pacific R. R.	170
Pryse, Ky.—Texas Company refinery and adj. property	80
Oyens, Iowa—Town Hall and adj. business property	70
Olathe, Kan.—National Guard Armory and adj. property	250
Maspeth, L. I., N. Y.—Plant of Cardinale Macaroni Co.	80
Newark, N. J.—Factory of Larry Gerring Co.	80
Mimico, Ont.—Church Street business and residential property	125
Newark, N. J.—Plant of Larry & Gering, Inc., and adj. property	170
Long Island City, N. Y.—Plant of Conway Importing Co.	80
Kensington, Pa.—Lumber yard of Ring Co., and adj. property	70
Houston, Tex.—Whse. of Pritchard Rice Milling Co.	90
Little Rock, Ark.—Merchant's Hotel destroyed	70
Eaton, Ohio—Eaton Theatre and Ayers shoe store	50
Purchase, N. Y.—Residence of Carl H. Pforzheimer	80
Chicago, Ill.—Offices of Goldenrod Ice Cream Co.	200
Pellston, Mich.—Maxfield general store and adj. property	50
Aitkin, Minn.—Mill and kiln of Ill. Cooperage Co.	85
Grand Rapids, Mich.—Cascade Hills Country Club destroyed	80
Bristol Bay, Alaska—Cannery of Bristol Bay Packing Co.	425
Redwood Falls, Minn.—High school building destroyed	80
Cresco, Iowa—Burgess Lumber Yard and adj. property	80
Muscatine, Iowa—Plant of Northern Gravel Co., damaged	50
Kansas City, Mo.—Kansas City Mills Whse. destroyed	70
Edmiston, W. Va.—Factory of Westite Glass Co.	50
Lawrence, Mass.—Lawrence Plate Glass Co., and other property	80
Loudonville, N. Y.—Dwelling of Paul McNamee destroyed	50
Betsylayne, Ky.—Tipple of Floyd Coal Co., destroyed	200
Lake Park, Iowa—Business property	70
Des Moines, Iowa—Des Moines motor freight terminal destroyed	80
Union Township, N. J.—Warehouse on Tuscan Dairy Farm	80
Troy, Ohio—Property of Troy Trailer & Wagon Co., destroyed	80
Altoona, Pa.—Residence of Mrs. Frank Hastings at Sylvan Hills	50
Richmond, Ind.—Storage plant of Miller-Kemper Lumber Co.	80
Marysville, Cal.—Property in Chinese section destroyed	50
Chesaning, Mich.—Chesaning Farmers' Elevator Co. plant	70
Napa, Cal.—Bldgs. on Stanly ranch	50
East Titusville, Pa.—Storage tank of Crew-Levick Co.	50
Jackson, Cal.—Property of Pioneer Lucky Mine, 17 mi. east	50
Ottawa, Kan.—Five dwellings in residential section	50
Beaconsfield, Que.—Country home of Sir H. Montagu Allan destroyed	55
Plaquemine, La.—Property of Schwing Lumber & Shingle Co., 1 mi. from here	80
St. Paul, Minn.—Yards of Webster Lumber Co. at city limits	50
Boston, Mass.—Five buildings on Albany Street	50
Leavenworth, Kan.—Farmers' National Grain Corp. elevator	400
Long Beach, N. Y.—Castle Theatre and adj. boardwalk property	800
Novelty, Ohio—Section of Telling-Belle Vernon Certified Milk Plant	50
Chanute, Kan.—High School Annex and Auditorium	125
Leetonia, Ohio—Plant of Melinger Lumber Co., destroyed	80
Joliet, Ill.—Moran Street Grade School bldg., damaged	80
Kansas City, Mo.—Empire Storage & Ice Co. plant	170

Five-Alarm Blaze Causes $100,000 Damage in Brooklyn, N. Y.

Five alarms were sounded for a fire which broke out in the Firestone Service Stores at Brooklyn, N. Y. Fire spread to three nearby garages. Damage was estimated at $100,000.

Chiefs Group Formed at Minnesota

An organization termed the Minnesota Fire Chiefs' Association, has just been formed with Frank Fuller, Brainerd, President. The other officers are Ben E. Bengerter, Mankato, Vice-President, and William L. Murphy, Caledonia, Secretary-Treasurer.

Conference Held at Lebanon, Oregon

A three-day conference on fire fighting was held at Lebanon, Ore., June 25-27, by the Oregon Fire Chiefs' Association. Officers elected are L. L. Mohr, The Dalles, President; M. J. Gilson, Lebanon, Vice-President; C. T. Lindsey, La Grande, Second Vice-President; Thomas Coates, Tillamook, Secretary; Ivan Pearson, McMinnville, Treasurer; W. F. Xandervelden, Forest Grove, and Tom Carlon, Bend, Trustees.

Chief Mohr of The Dalles gave an interesting talk on the methods used for training firemen in his city. Chief Roy Elliott, Medford, spoke on the method of fire prevention in schools followed in Medford. A number of demonstrations of methods were given during the gathering.

Chief Harrison, Onset, Mass., Dead

Chief Frank R. F. Harrison, Onset, Mass., died on August 4 at his home, following a long illness. He was eighty-two years old.

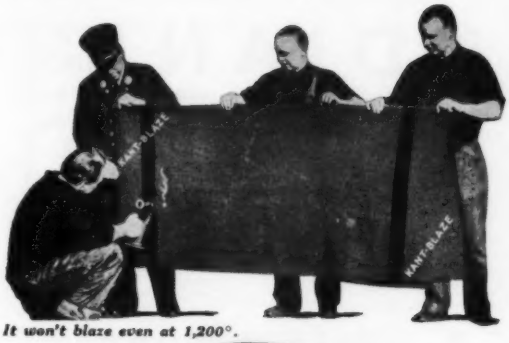
Born in New Bedford, and educated in the local schools, he joined the New Bedford Fire Department in 1872 at the age of eighteen. He was the last survivor of the New Bedford fire company that made the trip to Boston to aid in fighting the huge conflagration there.

In 1894 he was elected the first Chief of the Onset Fire Department. He served two years, then left the service, and was recalled to duty as Chief in 1924. He held that post until his death.

Chief Harrison was fond of gunning, and he had a camp at Barnstable where he went each fall for duck hunting. He was stricken there last fall, and as a result has not been active in the department since that time.

Chief Harrison was a member of the New England Association of Fire Chiefs, the New England Firemen's Association, the K. of P., and the I.O.O.F.

He is survived by his widow, a son, a daughter and a sister.



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CAIRNS LOW HEAD— CUSHION LINED **HELMET**

COMFORTABLE AS YOUR OLD FELT HAT; WON'T SHAKE OFF

Never go to a fire without the protection of a good helmet. It may save your life.

DESIGN - - MATERIALS - - CONSTRUCTION
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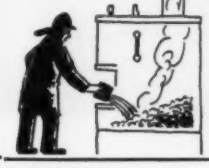

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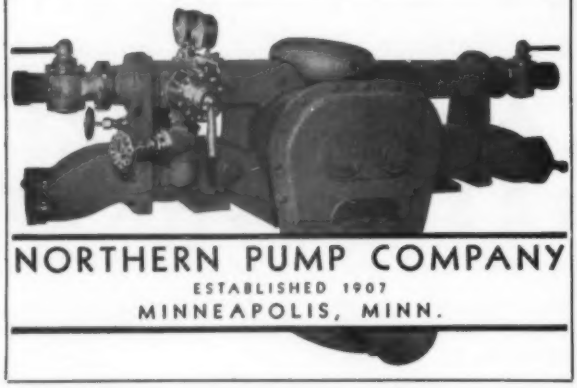

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ESTABLISHED 1907
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INDIAN FIRE PUMPS
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Gentlemen:

Our fire department have 18 of your Indian Fire Pumps in service. They are invaluable in combating grass fires as well as spot fires. Later this year we will be in the market for more Indian Fire Pumps.

Yours truly,
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5 gal. metal tank may be carried FILLED on truck ready for use. Extra strong construction, will not leak or puncture.

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FLAT CURED—
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Any type you want!

Quaker City makes a complete line of fire hose in a wide price range—but every foot of it is made to give you the best service you can get in its price class. For a complete list of brands and prices write us anytime—

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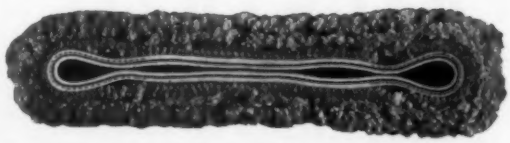
Bi-Lateral Fire Hose



The one hose that does not require frequent replacements. Always reliable for fire service no matter how old, if the jackets are intact.
Lined with three rubber tubes.

BI-LATERAL FIRE HOSE CO.
15 Park Row, New York, N. Y.
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Bids Wanted, For Sale and Help Wanted $5 *per inch. Position Wanted,* $2.50 *per inch*

Salesmen Wanted

To sell FIREALLS, a Streamlined, Waterproof, Air-Conditioned, Day or Night, Fireman Safety turn out coveralls. Has no equal in Safety, Speed, Economy, Comfort and Durability. Now used in 37 States. Write now. MORNING PRIDE MFG. CO., Dayton, Ohio.

Pumper for Sale

For sale, an excellent 500-gallon Pumper in first-class condition, can make immediate delivery, very low price, guaranteed to be in perfect working order. Box 785, FIRE ENGINEERING, 24 West 40th St., New York, N. Y.

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Working Superintendent — for Fire Apparatus Factory in Canada. Must have practical knowledge in all branches with experience in handling men. Give full information. Address Box 790, c/o FIRE ENGINEERING, 24 W. 40th St., New York.

CONVENTION DATES

Aug. 10-13—NORTH CAROLINA STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Hotel Sir Walter, Raleigh, N. C. Secretary, John L. Miller, Concord, N. C.

Aug. 11-12—CUMBERLAND VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 35th Annual Convention, Martinsburg, W. Va. Secretary, C. L. Jacobs, Waynesboro, Pa.

Aug. 11-13—INDIANA FIREMEN'S ASSOCIATION. 20th Annual Convention, Terre Haute, Ind. Secretary, Burley Marshall, P. O. Box 725, Terre Haute, Ind.

Aug. 11-14—STATE FIRE CHIEFS' ASSOCIATION OF VIRGINIA. 8th Annual Convention, Norfolk, Va. Secretary, Chief E. H. Rouse, Orange, Va.

Aug. 11-14—VIRGINIA STATE FIREMEN'S ASSOCIATION. 50th Annual Convention. Norfolk, Va. Secretary-Treasurer, O. B. Dabny, Staunton, Va.

Aug. 15—FIRE CHIEFS' EMERGENCY PLAN. Mid-Summer Outing and Clambake, Chief McGuire's Hotel, Washington Avenue, Peekskill, N. Y. Secretary, Walter M. Dawkins, P. O. Box 241, Port Chester, N. Y.

Aug. 17—VERMONT STATE FIREMEN'S ASSOCIATION. 46th Annual Convention, Rutland, Vt. Secretary-Treasurer, W. H. Adams, Vergennes, Vt.

Aug. 17-20—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 14th Annual Convention, Lodi, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Ave., San Diego, Cal.

Aug. 18-21—FIREMEN'S ASSOCIATION OF STATE OF NEW YORK. 64th Annual Convention, Tonawanda, N. Y. Secretary, Fred A. Davis, Fort Edwards, N. Y.

Aug. 21-22—CONNECTICUT STATE FIREMEN'S ASSOCIATION. 53rd Annual Convention, Greenwich, Conn. Secretary, D. W. Harford, 10 Chestnut Street, South Norwalk, Conn.

Aug. 26-28—DOMINION ASSOCIATION OF FIRE CHIEFS. 28th Annual Convention, Windsor. Ont. Secretary, Chief James Armstrong, Kingston, Ont.

Aug. 27-28—NEW YORK AND PENNSYLVANIA FIREMEN'S ASSOCIATION. 2nd Annual Convention. Elmira Heights, N. Y. Secretary, General Convention Committee, Elmira Heights, N. Y.

Aug. 29—INDIANA STATE FIRE CHIEF'S ASSOCIATION. Annual Convention, Logansport, Ind. Secretary, Chief Archie McCabe, Muncie, Ind.

Aug. 31-Sept. 3—NATIONAL MUNICIPAL SIGNAL ASSOCIATION. 41st Annual Convention, Hotel Pennsylvania, New York City. Secretary, W. H. Harth, Columbia, S. C.

Sept.—MISSOURI STATE FIREMEN'S ASSOCIATION. Annual Convention, Mountain Grove, Mo.

Sept. 8-10—MASSACHUSETTS STATE FIREMEN'S ASSOCIATION. 57th Annual Convention, Springfield, Mass. Secretary, Daniel J. Looney, Old South Bldg., Boston, Mass.

Sept. 12—THIRD INTER-COMMUNITY TOURNAMENT AND PARADE. To be held at Malverne, L. I., N. Y. Entrants, Fire Companies of East Rockaway, Island Park, Lynbrook, Oceanside, Malverne, Valley Stream and Rockville Center. Address J. Lorenzen, Secretary, Norwood Hook, Ladder & Hose Company Malverne, L. I.

Sept. 15-16—IOWA STATE FIREMEN'S ASSOCIATION. 59th Annual Convention, Hotel Winchester, Eldora, Ia. Secretary, Paul A. Soener, Independence, Ia.

Sept. 16-17—DELAWARE VOLUNTEER FIREMEN'S ASSOCIATION. 16th Annual Convention, Seaford, Del. Secretary, Sam H. Carson, Dover, Del.

Sept. 17-18—NEW JERSEY STATE FIREMEN'S ASSOCIATION. 59th Annual Convention, Convention Hall, Atlantic City, N. J. President, Chris Hasselhuhn, Carlstadt, N. J.

Sept. 18—NEW JERSEY STATE ASSOCIATION OF FIRE CHIEFS. Annual Meeting, Atlantic City Auditorium, at 8 p.m. Secretary, Fred A. Trowbridge, 29 South Street, Morristown, N. J.

Oct. 6-8—FIREMEN'S ASSOCIATION OF THE STATE OF PENNSYLVANIA. 57th Annual Convention, Williamsport, Pa. Secretary, Chief Charles E. Clark, Wayne, Pa.

Oct. 13-15—ILLINOIS FIREMEN'S ASSOCIATION. 49th Annual Convention, Pekin, Ill. Secretary, Assistant Chief Roy W. Alsip, Fire Department, Champaign, Ill.

Oct. 24-26—INTERNATIONAL ASSOCIATION OF POLICE AND FIRE SURGEONS. Annual Convention, New Haven, Conn.

Oct. 28—FIRE CHIEFS EMERGENCY PLAN OF FAIRFIELD COUNTY. Next Meeting, Nichols, Conn. Secretary, Lieut. John Moehring, Toms Road, Stamford, Conn.

Gamewell Dallas Office Moves

The southwestern branch office of the Gamewell Company, Newton, Mass., has been moved from the Burt Building, Dallas, Tex., to 3209 Ross Avenue, Dallas, Tex.

Charles F. Maulen, who has been with this company for more than forty years, will continue actively in charge of the territory, which includes Texas, Oklahoma, Kansas, Arkansas, and Louisiana.

Similar Names Cause One Death

A life was lost at a fire in New Hartford, Conn., recently because of a misunderstood telephone alarm.

New Hartford is served by the Winsted telephone exchange. New Hartford has a Cottage Street and so has Winsted. New Hartford has an active fireman by the name of Calder and so has Winsted.

One morning at 7 o'clock the Winsted Calder's telephone rang and a woman, in broken English, said there was a fire on Cottage Street and for him to do something about it. He agreed to, and telephoned one of the Winsted firehouses and sent a truck to Cottage Street, Winsted, but no fire was found by the men on the truck.

The woman was satisfied that she had given the alarm properly and in the meantime the New Hartford Cottage Street fire got a good start. Finally the New Hartford firemen responded but by that time the lone occupant of the house, John Sullivan, aged seventy-seven, had been burned to death.

THEODORE VAIL.

Melrose Has New Ladder

A demonstration of the new 100-foot Pirsch all Duralium aerial ladder truck recently delivered to Melrose, Mass., was held on the afternoon of July 10. Chief Frank Newman, of the Melrose Fire Department, was host to a number of Chiefs and fire officials from nearby municipalities, who witnessed the successful tests of this new piece of apparatus, which was manufactured by Peter Pirsch & Sons Company, Kenosha, Wis.

HARRY BELKNAP.

Michigan Chiefs Honor Craig

Chief Claud Craig of Owosso, Mich., was elected President of the Michigan Fire Chiefs' Association at the convention held in Manistee, Mich., Chief Craig has been in charge of the local department for twenty years. The next convention will be held at Saginaw.

New Quarters for E. N. Day

Ernest N. Day, of the New Jersey Fire Equipment Company, has opened new offices at 265 North Avenue, Dunnellen, N. J., in the old post office building.

In the new quarters, he has on exhibition a Pirsch "Smoke Eater," of latest design. He is the local representative for Peter Pirsch & Sons and has received an order from Glendale, N. J., for a 600-gallon pumper.

Kansas Firemen Hold Convention

A three-day convention of the Kansas State Firemen's Association was held at Seneca, with nearly three hundred in attendance.

E. W. Edwards, Liberal, was elected President; Cliff Williams, Clay Center, First Vice-President; S. E. Case, Garnett, Second Vice-President; K. D. Doyle, Wamego, Secretary; George T. Mohrbacher, Marysville, Treasurer.

At the chiefs organization, H. H. McCall, Wichita, was elected President; Paul Ingels, Lawrence, Vice-President; K. D. Doyle, Wamego, Secretary.

The 1937 Chiefs' convention and fire school will be held at Fort Scott, and the State Firemen's Association will meet at Hutchinson.

Chief Luby, Wallingford, Dead

After an illness of several weeks, John J. Luby, Chief of the Wallingford, Conn., Fire Department for several years past, died at his home in that city.

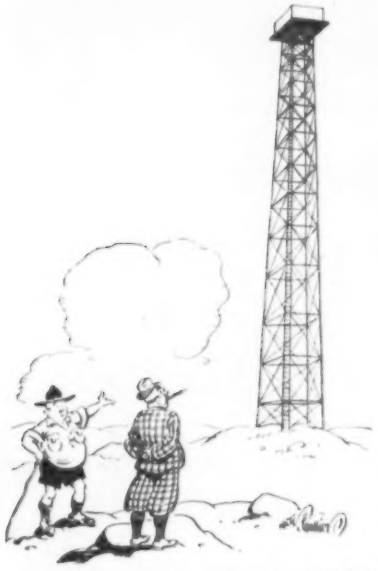
The funeral cortege was flanked by an honor guard of fifty Wallingford firemen led by Assistant Chief Henry Bronsford and headed by twenty fire Chiefs and officials from various cities in Connecticut. Solemn high requiem mass was celebrated at Holy Trinity R. C. Church. Burial was in St. John's Cemetery.

Among the attending Chiefs were Chief Lewis F. Stowe, Milford; Chief C. J. Carrington, Terryville; Chief Michael Lawton, Middletown; Chief William J. Noble, New Britain; Chief John F. Maroney, Meriden; Chief John C. Moran, Hartford; Chief Thomas F. Burns, Bridgeport; Chief Henry R. Taft, Norwich; Chief John S. Pachl, East Haven; Chief Isaac M. Hubbard, Greenwich and Chief Milton Galvin, Naugatuck.

The late Chief Luby was a member of the International Association of Fire Chiefs, New England Association of Fire Chiefs and the Connecticut State Firemen's Association.

THOMAS F. MAGNER.

FALSE ALARMS



Courtesy of "Judge"

"That's the lookout tower the government has put up for the forest it is thinking of planting here."

GOOD GUESS

The Chief had a reputation of being honest, very blunt, and very outspoken. In the course of his work, because of his love for things that would better the fire service, he had made many enemies among the politicians.

One day as the Chief was on the apparatus floor inspecting some repair, a fireman came up to him and said:

"I think, sir, you are wanted on the phone."

"You think," said the Chief gruffly. "What's the good of thinking?"

"I wasn't sure, for the voice at the other end said, 'Hello, is that you, you old idiot."

An uncivilized country is one where they do not have to transport a pay roll in an armored car.

JUST TACT

The boys at Truck 4 had a little party as a final send off for one of the gang who had just been married. As such parties generally do, the final good bye was said very early in the morning.

The next day at the station, the talk, of course, was about the party.

"What did your wife say when you got home so late?" asked one.

"She didn't say anything. She has her birthday in two more days."

A monologue is a conversation between a hard boiled drill master and a rookie.

IT HAD A KICK

"Good morning, Mr. Williams," said the waiter. "I hope you enjoyed that old Scotch I left in your room while you were out."

"It was pretty fair," drawled Mr. Williams, rubbing his lips as though in memory of the departed drinks. "However, that siphon you sent up had the strongest stream of fizz water I ever tackled. The blamed thing came near blowin' me out through the window."

The waiter looked puzzled. "Siphon? I didn't send up any siphon."

"Yes, you did. It was red and bound with brass bands."

"Great Scott," said the waiter, as he began to unsolve the puzzle, "That was the fire extinguisher."

A married man may have his better half, but a bachelor has his quarters.

CONCENTRATED

The new station was opened in the suburbs. As is generally the custom when a new station is opened, there was a day for public inspection. A fireman was showing a group of ladies through the building.

One woman remarked, "My, what a small kitchen you have."

"Yes," answered the guide, "It's so small that we have to use condensed milk."

FUTURE USE

A kind, benevolent old lady, very much respected in the community, chanced to learn that the department was in need of new fire apparatus. She volunteered to buy a new unit as a gift to the town. Soon salesmen started calling on her with their wares.

One remarked to the woman, "This apparatus will still be in use fifty years from now."

She smiled rather sweetly and said, "But in fifty years time, I shall not be here."

The salesman did not quite comprehend this remark for he continued, "But madam, it is so light and convenient, that you could take it anywhere with you."

One can't be everything—the peppery man is seldom the salt of the earth.

GOOD JUDGMENT

A conference was being held in the Council Chambers regarding the department budget. A reporter looked in at the session, and started making notes for his story. He whispered to the clerk:

"Who's that close-mouthed fellow over there?"

"He ain't close-mouthed. He's just waiting for the janitor to come back with the spittoon."

She was just a communist's daughter, and every one got his share.

TOO HOT

An Irishman's attic caught fire. His wife, running for the nearest available water, seized the kettle from the fireplace. On her way up the stairs she was met by Paddy. He stared aghast at the kettle in her hand.

"Mrs. O'Toole," he said sadly, "but it's a regular fool ye are an' all. Fancy trying to put out a fire with hot water."

Up at the fire hall, there was being held one of the monthly summer dances. It was intermission, so every one came in from outside to rest.

—Drawing by George C. Tichenor

The Rabbit that Exemplified Flaming Youth

According to press accounts, the worst fire in the history of the San Bernardino mountains was started when a rabbit, its tail ablaze, leaped from a pile of rubbish that was burning. and dashed into the tinder-like brush. Section hands of the Santa Fe Railroad were burning the rubbish, and they saw the rabbit leap into the brush. The animal left a fiery trail, and a twenty-mile breeze did the rest. More than six hundred acres in Cajon Pass were burned over before the combined efforts of five hundred CCC workers and one hundred forest rangers had the fire under control.

Ask for it... It's FREE

As a reader of FIRE ENGINEERING you are entitled to our buyers' information service free of cost. Here is how it works.

Whenever you are seeking information about any piece of equipment or material that you are planning to buy, first look through the advertisements in this issue. They are your best guide.

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8-36

34 years service in the fire field

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Prompt service Quality products

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Shut-Off Nozzles
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Threading Tools
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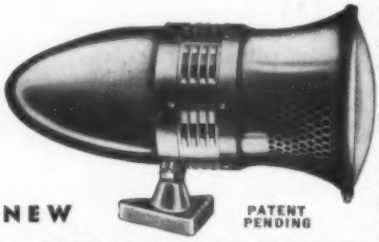

NEW PATENT PENDING

SIRENLITE

Combination No. 20 Siren and Powerful Red Flashing Light. Price—$49.50.

You can **HEAR** *and* **SEE IT!**

A powerful siren and light combined. The most practical warning device for all apparatus. A precision built instrument, same sturdy construction as all Sterling Sirens. Write for bulletin.

The Sterling Siren Fire Alarm Co., Inc.
ROCHESTER, N. Y.

A DEFINITE Hale aim—To progress through pioneering in design, research, test and construction rather than by imitation.

HALE FIRE PUMP CO., Inc.
CONSHOHOCKEN, PA.

BROWDER LIFE NETS

The most popular life net in America. Hundreds in use in fire departments and fire schools. An absolutely safe and dependable net. Specify BROWDER on all trucks.

CORY-PATTERSON MFG. CO.
GREENFIELD - OHIO

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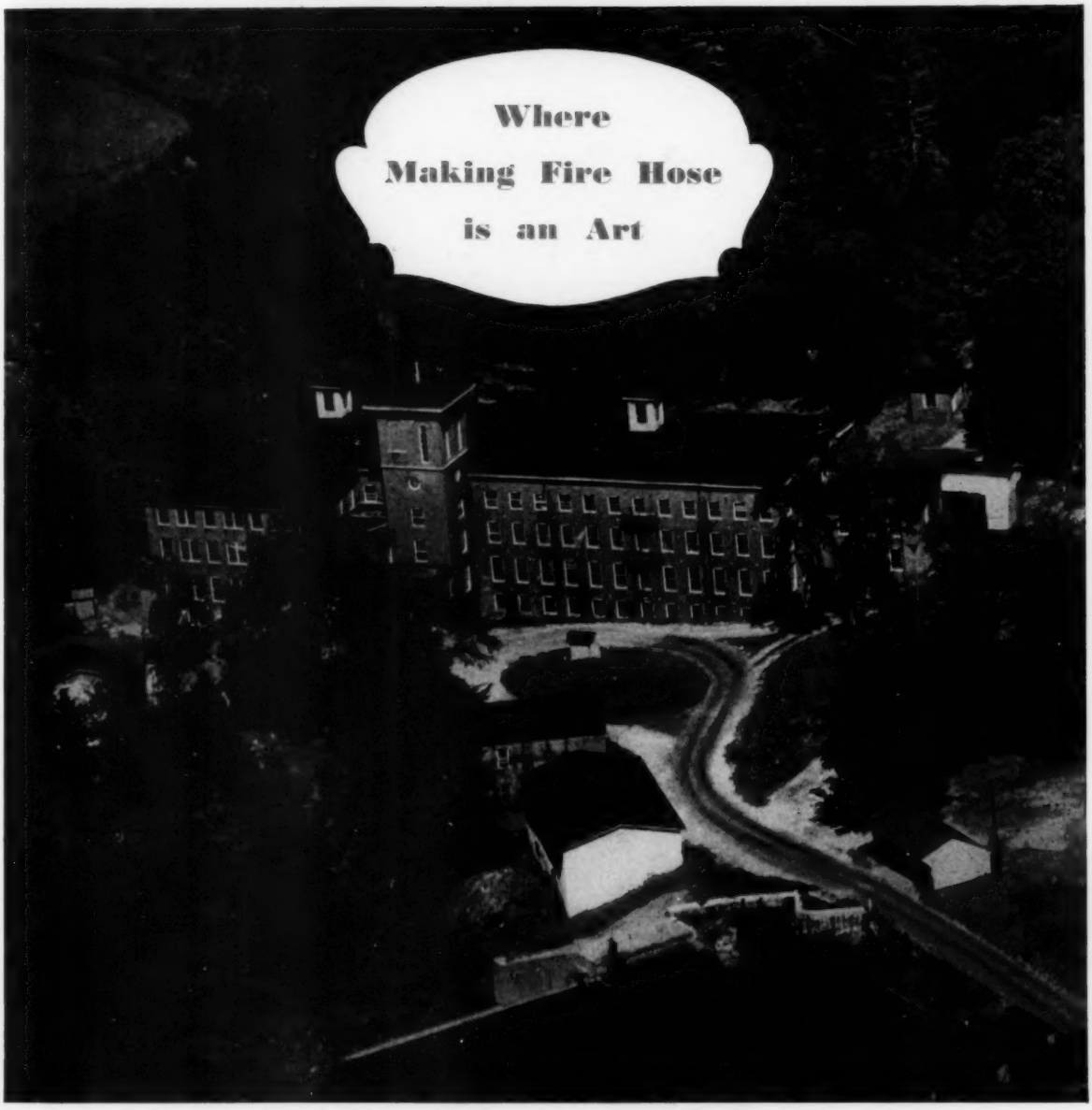


Aerial photograph of our factory at Sandy Hook, Connecticut, the only plant in the United States making municipal fire hose exclusively. Genuine Wax and Gum Treated Cotton Rubber Lined Fire Hose has been our specialty for fifty-five years.

FABRIC FIRE HOSE COMPANY

SANDY HOOK, CONN.

FABRIC FIRE HOSE

THE HOSE YOU CAN BE SURE OF

MILDEW PROOFING—Antiseptically treating EUREKA Fire Hose Fabric with mildew repellent solution.

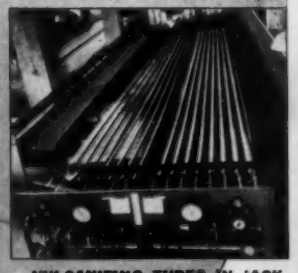
WEAVING—This illustrates the weaving of PARAGON "Multiple Woven" Fire Hose Fabric. The better fabric known.

BE SURE of your fire hose. Be sure that it will stand up under all kinds of conditions—that it will protect the lives of your firemen and the lives and homes of the people in your community—that it is made by a well-known manufacturer, of the best materials throughout, in a modern, fully equipped factory.

If you are sure that your hose meets these requirements, you must be using a Eureka brand of hose.

Eureka, with the most complete line of quality fire hose ever made and over 60 years of manufacturing experience, is the largest manufacturer of fire hose in the country. Be sure to call in a Eureka representative and let *him* know your hose needs.

ATTACHING COUPLINGS—Quality Couplings are an important feature of quality Fire Hose.



VULCANIZING TUBES IN JACKETS—Each length of hose is cured on individual Steaming Head to eliminate subsequent distortion when under hydrostatic pressure.

TESTING FIRE HOSE—All Brands of EUREKA Fire Hose are tested under hydrostatic pressure before shipment.

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